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TRANSACTIONS

OF THE

MEDICAL ASSOCIATION

OF

GEORGIA.

FORTY-SIXTH ANNUAL SESSION.

1895.

ATLANTA, GA.
PUBLISHED BY THE ASSOCIATION.
1895.

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"RESOLVED, That this Association shall not be considered as indorsing views of authors of papers published in connection with the Transactions, unless definitely so indorsed in the Proceedings of the Association.

"RESOLVED, That the above resolution appear annually upon the title page of our published Proceedings."

Transactions 1873.

The Franklin Printing and Publishing Co., Atlanta, Ga.

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MINUTES

OF THE

Medical Association of Georgia.

FORTY-SIXTH ANNUAL SESSION.

FIRST DAY—MORNING SESSION.

SAVANNAH, GA., April 17, 1895.

The Association met at Armory Hall at 10 A. M., and was called to order by the President, Dr. Willis F. Westmoreland of Atlanta.

Prayer was offered by the Rev. Dr. Dripps, after which the President introduced Mayor Herman Meyers, who delivered the following

ADDRESS OF WELCOME.

Gentlemen of the Medical Association of Georgia:

The pleasure and honor devolve upon me as chief magistrate of this city to bid you in its behalf a hearty welcome. I desire at the same time to assure you I am voicing the sentiment of our entire community.

While it is true that we, as well as other cities, invite citizens from all parts of this great country to visit us, and offer them every practicable inducement to locate permanently amongst us, in receiving you our inclinations prompt us to go a step further, recognizing that you represent a profession which not only commands our highest respect and esteem, but fully realizing the innumerable sacrifices you are constantly called upon and cheerfully make; your unflinching courage in meeting our common enemy, namely, Disease, it matters not of what nature, stubbornly fighting until you succeed in destroying him; the skill, time, and brain you so cheerfully and freely devote to relieve the ailments of

our poor. Nor do we lose sight of the advice, condolence, and sympathy you almost daily afford to the distressed. All of these, and many other noble characteristics that I could name, touch a tender chord, which impels us not to class you as ordinary visitors, but to welcome and receive you as members of our family, and as such we wish you to feel thoroughly at home.

Fortunately for you and happily for ourselves this large family is enjoying excellent health, and I fear some of our local physicians think it is distressingly healthy; so we shall not have to call upon you for any professional work, but desire you to devote most of your time to pleasure and recreation, of which no doubt many of you stand much in need.

In my judgment these annual meetings must be conducive of much good, particularly in advancing the science of your profession. We are not ignorant of the liberal spirit which prevails in your Association. The diffusion annually of knowledge gained by hard study, daily practice and experience, not only win our admiration, but gratitude. This spirit of philanthropy and liberality which exists amongst you could be advantageously emulated by other professions.

I sincerely hope your stay amongst us will be enjoyable, being quite certain the committee who have charge of that part of the program will strive to add laurels to our city's reputation for hospitality and entertainment, so that you may carry to your homes many pleasant reminiscences of this visit. [Applause.]

President Westmoreland then introduced Mr. J. F. B. Beckwith, who addressed the Association in behalf of the local profession, as follows:

ADDRESS BY MR. BECKWITH.

Gentlemen:

Last Friday morning Dr. Boyd honored my office with a call. Knowing the doctor to be a very busy man, I was somewhat surprised to see him. He wore an anxious look. I closed the doors, invited him to a seat, and drew my chair near to him. I stretched forth my hand and touched his pulse, professionally. I looked him in the eyes and requested that he show me his tongue. I said, "Doctor, what's the matter with you? Have you the grip? What have you been eating?" I pulled out my watch and took his pulse. Lo and behold, it was below the normal. Becoming somewhat alarmed at the symptoms, for syncope was imminent, I demanded the cause. He replied, dejectedly, "The eloquent Meldrim promised to welcome the doctors on Wednesday next, but business prevents, and I have come to ask that you make the welcoming address."

I dropped his hand, replaced my watch from habit, and paused until my reason returned. "Yes, Doctor," I said, "the gentlemen of your profession have relieved me in emergencies, and I think turn about is fair play."

A harvest smile shone over his countenance. He thanked me, arose, bowed himself out, and as I saw his willowy, professional form melting in the elevator, I shut the door of my office, slipped into my chair, and asked myself the question, what under heaven have I done? An answer, bright with the light of another world, came in view: For thirty odd years have you been a receptive, anatomical and physiological specimen for various gentlemen of this persuasion, and in the evolution of main chances a point of reciprocity has now been reached; avail yourself of the opportunity and prescribe—prescribe—prescribe. But what shall I give them? What is the intellectual and social diathesis of this august body that I am to address?

I am free to say that the only reply my witness would give was that as legitimate descendants of Hippocrates and Galen these gentlemen are indisposed to abolish morbidity of temperament and to treat the subject by cooling and diluent drinks, as I am told the divine old man, the father of physics, prescribed. This was called the "doctrine of concoction." This I define to be "a diluent, dietetical dissertation." These technical words, gentlemen, are unfamiliar to the laity, but we of the learned profession easily recognize their significance.

My friends, the medical fraternity of Savannah extends to you the heartiest welcome that warm hearts can give. Our homes and our inspiring tables are at your service. It is not often that our city is honored by so distinguished and so potent a body of men. Our citizens realize that in you we have the strongest natural friends of the human family. Without you the life would not be worth the living; nor could we live without you. You are with us at the first dawn of light and appreciative life; you are with us through the evolutions of mind and sense; you are with us through middle life; you are with us as we catch the earliest rays of the eastern sun; you are with us when the orb of day sinks into perpetual rest. How near to the hearts of the home and loved ones is the family physician. How anxiously we strain with bated breath to catch the first rays of hope from the eyes and lips of him upon whose skill depend the lives of those we love.

The man of God, in gentle, persuasive voice, tells of the seed of life let fall from the hand of the Heavenly Father upon the gardens of our hearts to quicken into spiritual life our temporal natures, that we may be in touch with the eternal one—that the protective and loving eye of him may ever as a stream of light guide and govern our moral lives. Side by side walks the man of science. His keen and cultured eye detects the scythe of the reaper as it steals upon the outer skirts of life. Watch him as he parries with the evil one in the struggle for the victim's life.

See him now as he turns back the deadly point and with keener wit and stronger weapon drives the avenger from the field of life. Is it not grand? Aye, it is magnificent. But the time comes when the giver of

life calls for his child, and then all your arts and offices cease, and like the balance of the human family, you must, and you ought to, bow in humble submission and say, "Thy will be done."

A distinguished Georgia judge has said that he would "rather be a fiddler on the coast of Georgia than a harpist in the kingdom of heaven."

During your visit you will be given an opportunity to meet the fiddler, and perhaps you will appreciate his festive and ubiquitous nature.

Old Madeira and terrapin stew, the salt breezes that kiss the Georgia marshes, and the sweet music of honest welcomes may make you yet yearn for eternal homes upon the shores of dear old Georgia. [Applause.]

The President called upon Dr. Frank M. Ridley, of La-Grange, to respond to the addresses of welcome.

RESPONSE BY DR. RIDLEY.

Dr. Ridley spoke as follows:

Gentlemen:

Allow me, on behalf of the State Medical Association, to extend to yourselves, and through you to the profession, to the people of Savannah, our profound thanks for your most gracious words of welcome. Such a greeting well becomes the record of your ancient and widely known hospitality, a hospitality characteristic of the old régime, a hospitality of, I might say, the so-called old South. But differing, as I do, with many in the acceptance of a condition, I do not recognize the new which abrogates the old. Indeed, there is no new South. The same chivalrous, loyal, and honorable manhood, the same true and pure and beautiful womanhood, characterize our citizenship as in days gone by; the same Hellenic sky spans its azure arch above us; the same streams ripple on to the same sea with the same music as of yore; the same woodlands in season wave their banners of gold and scarlet and green as in days agone; the same easter lilies bloom at our feet; the same sun paints its same blush upon the rose and touches the harvest into gold; the same gentle moon silvers the crested billows of the eternal ocean as they break upon the white sands of your coast and kisses the flowers to sleep in your wildwood.

There is no new South. There is only a difference in investment. The hospitality then of the old régime you preserve, we this day enjoy and most graciously acknowledge.

We are glad to be in your midst. Around your historic city cluster sacred memories, the mere mention of which quickens the pulse-beat and lifts us to a higher plane of sentiment and of thought. All about us lie the immemorial hunting grounds of that noble savage, Tomochichi, and his tribe, who were steadfast friends of the infant colony and

of Oglethorpe, the illustrious founder. Here, too, in this fair city by the sea Wesley, perhaps the grandest reformer of the nineteenth Christian century, started upon his circumnavigation of charity, which has well-nigh made a circuit of the globe.

Here in the stormy days of the revolution resided Habersham and his illustrious compatriots, who furnished the gunpowder with which the battle of Bunker Hill was fought. Coming down to a later generation, here resided, too, the Berriens, the Charltons, the Jacksons, the Screvens, the Barnards, the Laws, and last named, though not least of those immortal names that were not born to die, the matchless Francis Bartow, whose eloquence charmed, whose pathos touched, whose magnetism thrilled, who, at last, in the first great battle of the great Confederate struggle, poured out his life-blood as a libation to liberty in defense of a cause dear to his golden heart; and though it may seem an anachronism, I shall not omit the name of Count Pulaski, who fell in the siege of Savannah just as his countryman, Kosciusko, died in defense of Polish liberties on the ramparts of beleaguered Warsaw. These, gentlemen, are a part of your patrimony as a city. [Loud applause.]

Not far away is sweet Bonaventure, the *pere la chaise* of the South Atlantic coast, with its sturdy live oaks, festooned in death's drapery, through whose echoing aisles the funeral *cortége* moves with measured tread, and where in the springtime gloaming are spoken the whispered vows of youthful lovers, heard, it may be, by none save the fauns and satyrs that peep from some leafy covert.

In conclusion, I would briefly suggest a fact in which all patriotic Georgians feel an interest and a pride, and it is the historic fact that Georgia, the youngest of the whole thirteen, was founded for sweet charity's sake. Other States were planted for financial gain, or for political advantage, but the motto emblazoned upon Georgia's colonial escutcheon, "*non sibi sed allis*," bespeaks a loftier aim.

It has been reproachfully said that she was a kind of Botany Bay for delinquent debtors and for social outcasts. In reply to this harsh impeachment, I would say, that while it is historically true that Georgia did open wide her gates to the unfortunate debtor class of the mother country, among the hundreds who landed at Fredericka and Savannah, a large percentage were of the honest yeomanry of Warwickshire, the home of the illustrious Earl Gray, the kingmaker; in a word, while Massachusetts was settled by psalm-singing fanatics, and the tide-water districts of Virginia by cavaliers, Georgia was established by the honest industrial classes, who have become a part and a parcel of her glorious history.

In conclusion, my dear sirs, I beg to assure you that we are not in your midst for convivialism; we are here for the upbuilding and maintenance of our honorable profession. In the language of the physiologist, in this day of progressive metamorphism these annual meetings are

imperative if we would merit the compliment of the grand old Homeric bard:

> "A wise physician, skilled our wounds to heal,
> Is more than armies for the public weal,"

[Loud applause.]

In the absence of the Vice-Presidents, Dr. Elliott, of Savannah, took the chair, and President Westmoreland then delivered his Annual Address.

The Association then adjourned to meet in the dancing hall of the De Soto Hotel at 2:30 P. M.

FIRST DAY—AFTERNOON SESSION.

The Association reassembled at 2:30 P. M., and was called to order by the President.

Dr. Louis H. Jones, Chairman of the Committee on Program, stated that the work of the committee was represented in the program presented herewith, which speaks for itself. The committee earnestly desired that it be carried out as printed, and that it have full authority to make any change from time to time, if necessary. The exchanging of places and postponing of papers by individual members would result in confusion, and the committee hoped that this would not be done.

PROGRAM.

FIRST DAY.—WEDNESDAY, APRIL 17TH.

MORNING SESSION.—10 O'CLOCK.

Prayer.
Addresses of Welcome, by Major Herman Meyers, and Mr. J. F. B. Beckwith.
Response, by Dr. Frank M. Ridley.
President's Annual Address.
Report of Committee of Arrangements.
Report of Committee on Program.
Filling Vacancies on Board of Censors.
Application for Membership.

1. Some Observations with Regard to the Treatment of Typhoid Fever, A. C. Davidson, M.D., Sharon.
2. The Cause and Treatment of Corneal Ulcers, S. Latimer Phillips, M.D., Savannah.
3. Obstetrics in Vienna, Austria, Wm. B. Gilmer, M.D., Macon.

AFTERNOON SESSION.—2:30 O'CLOCK.

Report of Censors.
Application for Membership.
New Business.

4. Traumatic Wounds of the Eye and their Treatment, T. E Mitchell, M.D., Columbus.
5. The Topical Treatment of Chronic Circumscribed Eczema, Bernard Wolff, M.D., Atlanta.
6. Galvanism in Office Practice, J. C. LeHardy, M D., Savannah.
7. Urinalysis, Louis H. Jones, M.D., Atlanta.
8. Something New in the Treatment of Women after Confinement, R. J. Nunn, M.D., Savannah.
9. The Hygiene of Prison Camps in Georgia, W. O'Daniel, M.D., Bullard.
10. The Surprises we meet in Abdominal Surgery, Seth N. Jordan, M.D., Columbus.
11. The Management of Hemorrhage after Tonsil Operations, A. W. Calhoun, M.D., Atlanta.

SECOND DAY.—THURSDAY, APRIL 18TH.

MORNING SESSION.—9 O'CLOCK.

Reading of Minutes.
Application for Membership.
Report of Board of Censors.
Report of Treasurer and Secretary.
Reports of Standing and Special Committees.
Appointment of Auditing Committee.

12. The Proper Care of School Children's Eyes—The Necessity, Dunbar Roy, M.D., Atlanta.
13. Backbone as a Mental Antiseptic, J. S. Wimberly, M.D., Sanford.
14. A Duty of the State Medical Association, F. M. Ridley, M.D., LaGrange.
15. A remarkable Case of Ruptured Ectopic Gestation, Late Operation, Recovery, George H. Noble, M.D., Atlanta.
    Paper by Joseph Price, M.D., Philadelphia.
16. Graves's Disease, with cases, J. M. Hull, M.D., Augusta.
17. Reports of Several Interesting Operations, W. S. Armstrong, M.D., Atlanta.

18. Appendicitis, with a Brief Review of my Individual Experiences, Floyd W. McRae, M.D., Atlanta.
19. Gonorrhea, Its Effects and Treatment in the Female, J. W. Bailey, M.D., Gainesville.

ORATOR'S ADDRESS AT 12 O'CLOCK.

J. C. OLMSTED, M.D., Atlanta.

AFTERNOON SESSION.—2:30 O'CLOCK.

Application for Membership.
Report of Board of Censors.
Unfinished Business.

20. Nephroptosis, its Causation, Treatment and Relation to many Obscure Symptoms in Women—(Continued), W. W. Stewart, M.D., Columbus.
21. The Use of Strychnine in Obstetric Practice, Joseph Eve Allen, M.D., Augusta.
22. Ligation of External Carotid Artery as Preliminary to and Coincident with Operations upon the Jaws, with Report of Case, Wm. Perrin Nicolson, M.D., Atlanta.
23. Placenta Prævia, Report of Case, M. L. Currie, M.D., Ailey.
24. A Rare Intestinal Tumor, L. G. Hardman, M.D., Harmony Grove.
25. Laparotomy during Pregnancy, V. O. Hardon, M.D., Atlanta.
26. Report of Six Interesting Cases from my Obstetrical Practice, E. R. Anthony, M.D., Griffin.
27. Some Rare Cases in Obstetric Practice, with Especial Reference to the Treatment, C. H. Richardson, M.D., Montezuma.
28. Sympathetic Affections of the Eye, with Report of Cases, James H. Shorter, M.D., Macon.
29. A Postscript to my Paper on Scopolamine as a Mydriatic, A. G. Hobbs, M.D., Atlanta.
30. Diathesis an Important Factor in Diagnosis, and Treatment, W. E. Adams, M.D., Madison.

THIRD DAY.—FRIDAY, APRIL 19TH.

MORNING SESSION.—9 O'CLOCK.

Reading of Minutes.
Application for Membership.
Report of Board of Censors.

31. A New Method of Examining the Rectum, R. R. Kime, M.D., Atlanta.
32. Uremic Poisoning as Result of Albuminuria in the Parturient State, A. A. Smith, M.D., Hawkinsville.

33. A Report of My Surgical Work for the Six Months Ending April 15th, with some Deductions Therefrom, J. B. S. Holmes, M.D., Atlanta.

ELECTION OF OFFICERS.—11 O'CLOCK.

34. A Case of Cancer of Pancreas with Autopsy, Valentine H. Taliaferro, M.D, Atlanta.
35. Obstetrics as Practiced in the Mountains of North Georgia, T. M. Greenwood, M.D., Mineral Bluff.
36. Mind and Body, Charles S. Webb, M.D., Atlanta.
37. The Limits of Conservatism in Pelvic Pus-Cases, Ross P. Cox, M.D., Rome.
38. Ready Method of Resuscitation in Suspended Animation, P. L. Hillsman, M.D., Albany.

AFTERNOON SESSION.—2:30 O'CLOCK.

Application for Membership.
Report of Board of Censors.

39. Exarticulation of Hip and Shoulder Joints, Report of Cases, F. M. Ridley, M.D., LaGrange.
40. Management of Obstetrical Cases, Thomas D. Love, M.D., Atlanta.
41. Mental Suggestion as an Aid in the Treatment of Morphinomania, Cases in Evidence, Samuel H. Green, M.D., Oakdale.
42. The Modern Obstetrical Practice, C. D. Hurt, M.D., Atlanta.
43. The History of Medicine and Surgery in Georgia, L. B. Grandy, M.D., Atlanta.
44. Hæmophilia, A. W. Griggs, M.D., West Point.
45. Report of Some Unusual Cases in Abdominal, Gynecological and Obstetric Work, K. P. Moore, M.D., Macon.
46. Nasal Sprays—What Solution to Use, George Brown, M D, Atlanta.
47. Stone in Bladder, W. S. Elkin, M.D., Atlanta.
48. Uterine Fibroids, J. G. Earnest, M.D., Atlanta.

On motion, the report was adopted.

The President appointed to serve on the Board of Censors Drs. M. A. Baldwin and McLeod.

The next thing in order were applications for membership, but there were none to be reported on at this time.

Dr. Love: If I am in order, I will occupy the time of the Association for a minute or two. I desire to get information. In the first place, I wish to make a report

of the Committee on Necrology, reporting the names I have, and I will ask the members to report to me any deaths which may have occurred, and which have not been incorporated in my report. [Dr. Love then read the list of names he had.] They can then be published in the proceedings of the Association.

The names of Dr. J. W. Hallum of Carrollton, and J. M. Hatchett were given, whose deaths had occurred during the year.

Dr. Love desired that the initials "R. O." be added to the name of Dr. Engram, whose death had previously been reported in the Transactions.

Dr. Louis H. Jones, of Atlanta, read a paper entitled "Urinalysis."

Dr. E. R. Carson, of Savannah, read a paper entitled "Apostoli Treatment of Uterine Fibroids, with a Report of Nine Cases."

Dr. A. W. Calhoun, of Atlanta, followed with a paper on "The Management of Hemorrhage after Tonsil Operations."

Discussed by Drs. Hull, Shorter, Hobbs, Roy, Love, and in closing by the essayist.

Dr. R. J. Nunn, of Savannah, read a paper entitled "Something New in the Treatment of Women after Confinement."

On motion, the Association adjourned until 9 o'clock Thursday.

SECOND DAY—MORNING SESSION.

The Association met at 10 A. M., and was called to order by the President.

Dr. Boyd, Chairman of the Committee on Arrangements, extended an invitation to the members to visit the Historical Society, and other places of local interest.

Under the head of "Reports of Standing and Special Committees," Dr. J. B. S. Holmes reported on behalf of the Committee on Legislation. He said:

As Chairman of the Committee on Legislation, I have the honor to report that, after long, continuous and persistent efforts, we have succeeded at last in getting a bill passed by the legislature establishing a Board of Medical Examiners for the State of Georgia. The bill, as approved by the Association two years ago, we failed to pass. That bill provided that the board should consist of so many members of the regular school, so many eclectics, and so many homeopaths. We were fought on all sides, and found it absolutely impossible to pass it. During the past summer a committee from the Atlanta Medical Society in connection with myself drafted a bill providing for three boards of five members each—one representing the regular school, one the homeopaths, and the other the eclectics. I wrote to the different members of the committee (one from each congressional district), and stated that while the bill was not what we wanted, it was a beginner, and that we had better accept it, inasmuch as the homeopaths and eclectics would fight us. Each of these gentlemen wrote me, and agreed with me that while the bill was not what we wanted we had better accept it. So at the last session of the legislature it was unanimously passed, and went into effect during the present spring. I desire to state that no man on the committee worked harder than Dr. Baird of Atlanta. After the bill has been in operation for a while such amendments to it as may be deemed proper by the board can be made and recommended to the Association, and let them act upon them. The governor has appointed the board, and it held its first meeting two or three weeks ago, and I am informed about eighty applicants went before the regular board. I think the eclectics have also held a meeting; but the homeopaths have not thus far. I have here with me copies of the bill, which I will place on the Secretary's table for distribution.

Dr. McRae: I move that we accept the report of the committee, indorse their action, and that the committee be discharged, with the thanks of the Association for their efficient work.

Seconded and carried.

Dr. J. G. Hopkins: Mr President, I desire to bring up the resolution I offered at Americus two years ago, which was laid over for action at this time. I suppose the members are all familiar with it. It was a resolution looking towards the consolidation of the offices of Secretary and

Treasurer. I think this would be a wise step, if the Association sees fit to take it. Most of you are aware that the Transactions have been received so late that they are stale when they reach us, and by having the two offices consolidated it would enable the Secretary and Treasurer to get out the Transactions in a much shorter space of time, and give them to us while they are fresh and new, and we would enjoy them much more. Besides, we can well afford to pay one man to attend to the business part. I therefore move the adoption of the resolution.

Seconded.

The President: The chair desires to say a few words in regard to that resolution. It was printed in the last year's program, but not in this year's. In investigating the resolution, I found that the two terms of office expired in different years, the Secretary's term in 1895, and the Treasurer's in 1896. Necessarily, the effect of that resolution, if adopted, would affect the office of the Treasurer. In other words, can you declare an office vacant where the election has already been for five years and expiration has not occurred, unless by action of the Association the party holding the office is discharged for some cause? That is the position this resolution stands in. It is open for discussion, but the effect of it will be the declaration of one office as vacant if it is carried.

Dr. Hopkins: We would like to hear from the Treasurer on the subject.

Dr. Goodrich: In Americus two years ago I offered my resignation as Treasurer. At that time it was not accepted, but I am only too glad to resign from the position.

The President: While the resolution may be an excellent one, it is the very best combination of offices in this Association. The duties of these offices have been discharged ably and well. The lateness of the Transactions might depend more upon circumstances than are governed

by either one of these officers. We have a good deal of unnecessary by-laws printed in the Transactions, the object of which probably the majority of members do not understand. They are in such a condition as to need codification by some one familiar with the Transactions for the last fifteen years to get them straight. The resolution necessarily places the Treasurer in a very embarrassing position. The Treasurer was elected for five years, and of course the mere fact that he is elected for that term and it does not expire until 1896 makes the resolution unconstitutional. The Association puts itself in a position of trying to bring up this unconstitutional amendment by taking an unconstitutional action of desiring to know from the Treasurer as to whether he will resign or not in order that this amendment to the constitution can be made constitutional. I think it would be a very bad precedent to establish, and I hope the Association will not take this means of carrying out their work.

The resolution was further discussed by Drs. Jones, Spence, and Hopkins. The two former gentlemen agreed with the President regarding the unconstitutionality of the amendment.

At the close of the discussion the President declared the amendment unconstitutional, and added that the Association could appeal from the decision of the chair if it saw fit; but it did not.

Dr. Wm. A. Love then read the report of the Committee on Necrology.

To the Georgia Medical Association:

It has been my duty to seek, at your command, the data of the record left by the death angel through the year since we met, and since our last report on necrology.

I am glad to report that within the year just gone not many times has this sad reaper visited our ranks.

In reply to the several hundred letters of inquiry which I have sent out only a few answers have returned death notices. Two of these men-

tioned deaths that occurred previous to our last meeting, but gave us notice that

J. W. HALLUM, M.D., AND HENRY J. SMITH, M.D.,

have found that "death is life's high mead."

Dr. J. W. Hallum, of Carrollton, Ga., was graduated from the Atlanta Medical College in 1882, and in 1891 became a member of the Georgia Medical Association.

Dr. Henry J. Smith, of Blackshear, was graduated at the medical department of the University of Louisville, in 1872. He was admitted to membership in the Georgia Medical Association in 1887.

Both have gone hence, and we mourn our loss, but for them we remember: "*Death is the gate of life.*"

GEORGE MARSHALL STOVALL.

At the session of the Georgia Medical Association held in Atlanta in 1894, George Marshall Stovall, M.D., was admitted to membership. There was every reason to suppose that for him there would be years of useful service, but in a few short months his best friend wrote of him: "George Marshall Stovall is off duty forever.

Dr. Stovall was born in Elbert county, Georgia, April 13, 1867, and hose who have known him through all his short life say he was always true, always manly, diligent, and courageous, winning and preserving the confidence of his associates, loyal always in his friendships and unswerving in principles.

Self-educated, Dr. Stovall was graduated at the College of Physicians and Surgeons, in 1892, with credit to himself and honor to his friends. In December, 1892, he was married to Miss Nellie Power of Madison county, and to them was born a son only a few weeks before his death.

Dr. Stovall was recognized as a young physician of unusual promise. His unexpected death, which occurred in Elberton, Ga., November 5, 1894, while fearless in faith, because he met the last enemy in triumph, was yet a sad blow to his loved ones, and he was greatly mourned by his entire community, evidence of which we present in the appended quotation from the "In Memoriam" published in his county paper:

"Noble young man, comrade, friend, husband, father, son—true in all—'tis hard to give thee up. Fare thee well! God keep thee! God rest thy soul in peace, thou golden-hearted gentleman!"

Sure we would ask, with Tupper's philosopher:

O Death! what art thou?
An husbandman that reapeth always
In season, as out of season,
With the sickle in his hand?

W. F. WESTMORELAND, M.D.

Never came better evidence, than in the name presented above, to prove:

"There is no Death!
What seems so is transition;
This life of mortal breath
Is but a suburb of the life elysian,
Whose portal we call Death."

Partly because we have had no report on necrology in the late sessions of the Association, but largely because we cannot make ourselves think of Willis Westmoreland as "dead," there has been no action taken in this body on his death, hence is embodied in this report the memoir which it is my sad pleasure to present.

Of English ancestry and American parentage, the subject of this memoir was born in Fayette county, Ga., June 1, 1828. His education was obtained in the local schools and academies, when, on nearing his majority, he selected medicine as his profession. In prosecuting its study he attended lectures in the Medical College of Georgia, in the Medical Department of the University of Nashville, and then in the Jefferson Medical College, where he received his degree in 1850. After graduating he located first in Fayette county, but in 1851 removed to and settled permanently in Atlanta.

With a taste for surgery as his special practice, and for the purpose of making himself proficient in this department of medicine, he went to Europe where he spent three years, principally in Paris, at that time the medical center of the world.

About this time (1854), under the leadership of his brother, Dr. John G. Westmoreland, was organized THE ATLANTA MEDICAL COLLEGE, and he was called to the chair of Principles and Practice of Surgery, which position he filled with distinguished ability *until called to join the great majority beyond the river.*

In his field of labor he possessed an unusual ambition, combined with a zeal, energy, and power of endurance of a most remarkable character, yet well known and often commented on by those who knew him best.

As a surgeon and physician he had no superior in this section of country, still, withal, he was at all times modest and reserved—never ostentatiously forcing his opinions on others—in fact, in his opinions he was rather reserved; they were at times hard to draw out, but when obtained they were of value; for though often slow in deciding a point in difficult, obscure or complicated cases, when he did decide, his conclusions were eminently correct. This fact gave him success and distinction as a physician, and especially as a surgeon.

As a teacher he was clear and forcible, and at all times claimed the attention of his class. As an operator he was careful, painstaking and sucessful. This, together with the correctness of his pathology, diagnosis, and prognosis, gave him eminence throughout the South.

At the beginning of our late civil war he left a lucrative practice and joined the surgical corps of the Confederate States army—first in the field, then in the hospital department; and was placed in charge of the Atlanta Medical College Hospital, where he continued to serve until the surrender. It was in this connection that the writer was for a time associated with him in the service.

As a military surgeon he was always careful of the men who fell under his professional care, seeing that they received proper attention at the hands of the medical officers, and that they were well provided for so far as it was possible with the means at command. Brave, resolute and fearless, but tender-hearted as a woman, soldiers who had the misfortune to fall under the surgeon's charge had cause to congratulate themselves if they came into his hands, not only because of his skill as a surgeon, but because of the tender care and close attention they received. While the writer had known him well from his earlier professional career, it was in this field of professional work that his true character was made more prominent and the kindness of his heart set forth with most prominence.

He loved his profession and his fellowman. He was a lifelong student, and not only kept fully abreast with the foremost in his special field, but he used his best endeavors to bring others apace with himself. With this idea, he was one of the original projectors of *The Atlanta Medical and Surgical Journal*, which, founded in 1855, he fostered through life, making valuable contributions to its pages.

It was in this work that the writer was again associated with him, and learned with what rapidity he gleaned and gathered from the field of medical literature, and what judgment he displayed in his selections.

He was ever ready to advance the social features of his profession. In 1856 he became a member of this Association, and was, in 1873, elected its president. In 1872, at the meeting in Philadelphia, he became a member of the American Medical Association.

We transfer to this report the following tribute to his memory, by Dr. Frank Park, one of the editors of the *Clinic* for November, 1890:

"As former students under the surgical instruction of Dr. Willis Foreman Westmoreland, deceased, and being deeply sensible of the loss that we have sustained, in his death, the editors of the *Clinic* have resolved to print a suitable testament to his life and services, and by resolution adopt the following from the columns of the Atlanta *Constitution*, by one of our number, which we consider a deserving tribute to the memory of Georgia's greatest surgeon:

IN MEMORIAM.

"When great hearts have passed away,
Men gather in awe and kiss their shroud,
And in love they kneel around their clay."

"Trusting that respect and reverence for the memory of Georgia's

great son will pardon any seeming presumption in the effort, we seek to weave one weeping willow twig in the chaplet of mourning garlanding the name of Dr. Willis Foreman Westmoreland.

"No man could know him without feeling his influence; no one could talk with him without realizing he was in the presence of one whose strength of character was adamantine in its grandeur and beauty. To superficial observers his manner was harsh and abrupt, but underneath it all there pulsated a heart laved in the milk of human kindness, and fraught with impulse as noble and generous as that of any who ever dried an orphan's tear or calmed the fears of suffering misfortune.

"Self-confidence, based on success and independence of thought, characterized his life. Without sanctimony or affected humility in aught he said or did, but true and outspoken to the laws of nature and nature's God, before whose shrine alone he bowed, he lived fearless and true to those principles of integrity and honor underlying his character and life. He is one of the few true and tried whose lives have stood forth prominently in our State history for thirty years, and whom Georgia is honored to claim as sons. One by one they are gathering in.

"'And some have gone the unknown way,
While some await the call to rest:
Who knoweth whether it is best
For those who went or those who staid?'

"The ceaseless clang of eternity's clock-stroke is beating the march of death, in whose unbroken line 'soul touches soul. The muster-roll of life eternal knows no gaps.'

"'Gone! and there's not a gleam of you,
Faces that float into the far away;
Gone! and we only can dream of you
Till we sink like you and the stars away.'

"Of friends who knew him we gathered our ideas of what this pyramid amidst life's vales of trial and misfortune must have been in the heyday and full tide of his usefulness and strength.

"Beginning the practice of his profession while young, he commenced his course unknown to the influence of wealth and friends in high places, actuated by 'that last infirmity of noble minds, a desire to do and be something.' The picture is of a youthful surgeon, tall, athletic, of noble bearing, pale from overwork and study, with the flash of genius illuminating his face and the deathless fire of indomitable will and energy lighting his eagle eye. Conscientious, painstaking, steadily he climbed the heights, planting his unerring footseps in the difficult pathway to fame's lofty summit.

"Shod with unshaken faith in the truth of those eternal principles of his profession, surmounting some obstacles, pushing through others, undaunted by any, he strewed his rugged pathway with the sweet flowers of charity and brightened many a clouded heart with the sunshine of his genius and the rays of benignancy that shot from his noble nature.

"On he marched, accepting no teaching till tested in the crucible of his scorching investigation; clinging to the useful and true, scattering the false and injurious.

"The champion of humanity, justice and truth, he stood firm by his convictions when oppression, in the form of greed and neglect, ground and crushed the condemned felon in the convict-camps of his State. He opposed tyranny and injustice with the force of a God-chosen champion of right and mercy, till the ear of his sleeping mother-State caught the wail of the suffering convict, and she woke to legislate against injustice and in favor of humanity to the unfortunate. This act established an immortal monument, more enduring than brass or marble, to a son who 'knew the right, and knowing, dared maintain.'

"The brightest deeds of Georgia's greatest civic sons grow dim in contrast with the deeds of mercy and charity which sparkle from the crown of his noble life. He was a true man, a great physician. Perfection in his profession and loyalty to duty were his aim and object. He never faltered in the one, and approximated more nearly the other than any, perhaps, of this nineteenth century.

"Easily outstripping all contemporaries, because his great and lofty aspirations, born of the highest order of genius, had set the goal of his ambitious flight beyond the clouds of difficulty and doubt, which darken most minds, and his coworkers sought not to rival, but to emulate.

"Were it not for minds like his, the dust of antique time would lie unswept and mountainous error grow too highly heaped for truth to overpeer.

"A hush falls on the heart of Georgia to-day. Her children mourn over the broken vase from which the flower of life has been transplanted to the garden of those grand philosophers and scientists whom humanity revere and cherish out of love born of grateful loyalty to earth's benefactors. The grand old man is gone. With honors thick upon him, he has gone from the field of his triumphs and trials, from the cares and sufferings which were gradually wearing away the brightness of his life. He was no vessel of baser metal plated with ornamental gold, but the solid, unalloyed heavy metal that sung tones of sad sweetness under the blows of misfortune received while living. Whenever suffering clashed against him, it did but reveal the same solid, pure stuff which glittered 'neath the friction and blows that hacked and wore it. We offer him a silent benediction in our hearts. He is dead, but lives. He has locked hands, ere this, with Hill and Tombs and Stephens and Grady. His life has gone down as a sun, leaving upon the moutain tops of death a light that made them lovely."

Such is the feeling tribute to his memory by his class—the students of the *Atlanta Medical College.*

On motion, the report was adopted.

The next thing in order was the appointment of the Auditing Committee.

The President appointed on this committee Drs. R. D. McLeod, F. M. Ridley, and W. P. Nicolson.

Dr. Dunbar Roy, of Atlanta, then read a paper entititled "The Proper Care of School Children's Eyes—The Necessity."

The paper was discussed by Drs. Shorter, Calhoun, Hull, Hiers, and in closing by the author of the paper.

Dr. F. M. Ridley, of LaGrange, read a paper on "A Duty of the State Medical Association," which was discussed by Drs. Love, McRae, R. E. Griggs, T. M. Greenwood, and Westmoreland. At the close of the discussion, Dr. Love moved that a committee of five be appointed to act on the recommendations and suggestions contained in the paper.

Seconded and carried.

Dr. J. M. Hull, of Augusta, read a paper entitled "Graves's Disease, with Cases."

Discussed by Drs. Roy, Corson, Gaston, Jr., and in closing by the author.

Dr. W. S. Armstrong, of Atlanta, read a paper entitled "Report of Several Interesting Operations," which was discussed by Dr. McRae.

Dr. R. J. Nunn, of Savannah, made the following report of the Committee on Prize Essays:

SAVANNAH, GA., April 18, 1895.

To the Officers and Members of the Medical Association of Georgia:

GENTLEMEN—On March 26, 1887, there was placed in the Oglethorpe Savings and Trust Company to the credit of R. J. Nunn, Chairman of the Committee on Prize Essay Fund of the Medical Association of Georgia, the sum of $91.66 derived from private subscriptions. The money has remained at interest ever since and now amounts to $126.01.

Respectfully submitted,

R. J. NUNN.

Dr. McRae asked what the conditions were governing

the amount of money. To which Dr. Nunn replied there were none, except an essay worthy of the society and fit for publication as a prize essay.

Dr. F. W. McRae, of Atlanta, read a paper entitled "Appendicitis, with a Brief Review of my Individual Experience," which was discussed by Drs. Nicolson, McIntosh, Gaston, Jr., Boyd, Hardon, Holmes, Doughty, Moore, and in closing by the author of the paper.

The Board of Censors reported favorably on the applications presented for membership during the sessions, and the following applicants were declared duly elected:

E. S. Purse ..... Savannah, Ga.
F. R. Wallace ..... Cordele, Ga.
Thos. Chason ..... Donalson, Ga.
J. K. McKinnon ..... White Oak, Ga.
D. C. Chason ..... Iron City, Ga.
E. B. Bush ..... Colquitt, Ga.
L. P. Saur ..... Stillmore, Ga.
Chas. J. Montgomery ..... Augusta, Ga.
W. W. Battey ..... Augusta, Ga.
E. Callaway ..... LaGrange, Ga.
E. P. Ham ..... Gainesville, Ga.
W. L. Patton ..... Mill Town, Ga.
Chas. A. Moran ..... Atlanta, Ga.
R. E. Corson ..... Savannah, Ga.
J. L. Hiers ..... Savannah, Ga.
J. E. Allan ..... Augusta, Ga.
A. S. Haws ..... Elberton, Ga.
A. L. R. Avant ..... Patterson, Ga.
M. O. Fulcher ..... Waynesboro, Ga.
T. C. Shepard ..... Savannah, Ga.
W. T. Aikin ..... Savannah, Ga.
T. M. Merritt ..... Cavalry, Ga.

On motion, the Association adjourned until 2:30 P. M.

SECOND DAY—AFTERNOON SESSION.

The Association reassembled at 2:30 P. M., and was called to order by the President.

The Treasurer Dr. Goodrich then read his report as follows:

Medical Association of Georgia:

Printing 500 Transactions as per voucher		$466 65
Sending out 303 Transactions		60 60
Sending out back numbers to members, printing, etc., as per voucher		60 40
		$587 65
By cash from fees	$466 65	
By cash	110 00	$576 65
Balance on hand		$11 00

Dr. Shorter moved that the report be adopted.

Carried.

Secretary Howell then read his report.

On motion of Dr. Love, the report was received and referred to the Auditing Committee.

Dr. William O'Daniel, of Bullards, read a paper (by title) on the "Hygiene of the Prison Camps in Georgia."

Dr. Wm. Perrin Nicolson, of Atlanta, made some extemporaneous remarks on "Ligation of External Carotid Artery as a Preliminary to and Coincident with Operations upon the Jaws," which was discussed by Dr. Shorter.

DISCUSSION ON DR. NICOLSON'S PAPER.

Dr. J. H. Shorter of Macon: Mr. President, I have operated on one case of tumor of the superior maxilla, and if ever I encounter another such case I should certainly precede it by the operation which Dr. Nicolson recommends for arresting the hemorrhage. Hemorrhage in my case was an extremely important factor, and the patient bled so profusely that I expected to lose him. However, he recovered from the operation. The operation was done

for malignant disease of the antrum. It closed up the nasal fossa on one side from behind and almost closed the pharynx. A diagnosis was made of tumor of the antrum which turned out to be sarcoma. The tumor was removed, followed by a successful result. If I should have occasion to do this operation again I should precede it with the method outlined by Dr. Nicolson as a preliminary. I would also resort to it in case of removal of the parotid gland, which is a troublesome operation if we go down very deep, and the ligation of the arteries would make the operation very much safer.

Dr. V. O. Hardon, of Atlanta, read a paper entitled "Laparotomy during Pregnancy."

Dr. James H. Shorter, of Macon, followed with a paper entitled "Sympathetic Affections of the Eye, with Report of Cases," which was discussed by Drs. Calhoun, Hobbs, and in closing by Dr. Shorter.

Dr. W. F. Holt of Macon: In my inaugural address before this Association in 1883, I took occasion to urge upon the profession the importance and absolute necessity of establishing an inebriate asylum in this State and gave my reasons for it. After the lapse of twelve years, I am more convinced than ever of the importance of such an institution in the State, and in correspondence with various members they think it very important. It is an old hackneyed subject, yet it is in the interest of a good cause, and we ought not to be weary in well-doing. I therefore introduce this resolution if I can get a second to it, and I hope it will elicit free discussion.

Dr. Holt then read the following resolution:

Resolved, That this Association appoint a committee of three to memorialize the legislature to establish an inebriate asylum in this State, and earnestly recommend the passage of the same.

Dr. Moore of Macon: As I understand the laws of the State, inebriates are now not admitted into the lunatic

asylum. Formerly, we could send these people to the lunatic asylum and give them care and proper treatment. But three years ago the legislature passed a bill prohibiting the admittance of this class of patients into the lunatic asylum. And so when a man has advanced to that point of inebriety worse than a lunatic in some respects, he is debarred from entering the asylum on account of the cause that has brought on his mental condition. If there is anything on earth that should appeal to the medical profession, it is this unfortunate condition into which men sometimes get, for we all know it comes to be a disease, and that when a man gets into this condition he deserves our attention more than our sympathy. When he reaches that point where it is a disease with him, he certainly then falls on the side of sympathy and appeals to our sympathy. A man in that condition is absolutely powerless, so far as the will goes, to resist the taking of strong drink. In view of the fact that there is now no place to which we can assign these unfortunate people, I heartily second and indorse the resolution which Dr. Holt has offered. The Association can do no more magnanimous thing than to appoint such a committee. It may be argued that we cannot accomplish our object, but let us try, try again until the legislature sees the necessity of establishing such an institution.

Dr. Love of Atlanta: If there is any question which this Association should consider at this time, it is the subject under consideration so as to influence the lawmakers of the State, and especially since the legislature has prohibited their admission into the insane asylum. You and I know well that time and time again we are brought before the courts to decide upon the question of the insanity or sanity of individuals who have committed offences against the laws of the State. It is for us to decide the question whether the accused is sane or insane. Now, let me ask you to help to establish this institution as a half-way house, if you

please, as a retreat where these unfortunates may be cared for until they can be relieved of this pathological condition, for it is as much a disease as malaria or any other fever with which we have to contend. I am thoroughly satisfied with regard to that. It is impressed upon the nervous system, and it is a craving that they canno t resist. Let us through legislation extend a helping hand to them and stop them in this half-way house and cure them and turn them back into society as good citizens, to discharge their duties as such among their fellow-men. I do not propose to discuss the question from a prohibition standpoint, but simply from the slandpoint of a professional man. We are looked to as a profession to guide, to protect, and to direct in the lawmaking of the State for sanitary purposes, for the purpose of relieving pain and prolonging life, thus preserving the intelligence and integrity of our people. This is my position, and I hope the Association will indorse the resolution, and through the committee to be appointed appeal to the legislature in behalf of this unfortunate class of people.

Dr. T. O. Powell: This class of people strongly deserve our profound sympathy and unselfish aid in their behalf. The ultimate result is that many of them drift into our insane asylum. Many of them are voters, and if the proper care is bestowed upon them in the beginning they might be restored to their families, to society, and become productive powers of the State. Under the law now we cannot receive them. They should not be mixed with the insane. There should be a separate and distinct institution in some other part of the State; hence, if we had an institution of this kind these inebriates would not hesitate to go to it voluntarily in the beginning of the disease when it is curable, but when they are allowed to drift along many of them become permanently insane, and the only thing to do is to care for them. It is an annual ex-

pense to the State for a lifetime, when they might be productive powers of the State if we had such an institution. I trust the Association will adopt the resolution.

Dr. R. H. Taylor of Griffin: I heartily indorse everything that has been said, but there is one point which I wish to add. There is an opinion among the laity that drunkenness is an individual debauchery, for which the individual alone is responsible, and on account of that sentiment prevailing among those who entertain such an opinion there is a lack of sympathy. If the medical profession will come out as a body and give positive utterance to the opinion that it is beyond their control as individuals without help and treatment to check this habit, it will go a long ways towards influencing the legislature to establish a retreat for these poor unfortunates. [Applause.]

Dr. Wm. O'Daniel: Dr. Taylor is correct in his opinion, that there is a want of sympathy among the laity for these people. Our legislators are more disposed to recognize the wishes of the medical profession than formerly, and I believe we can influence them to establish an inebriate institution.

The President then put the motion to adopt the resolution, and it was unanimously carried.

Dr. A. G. Hobbs, of Atlanta, read a paper entitled "A Postscript to my Paper on Scopolamine as a Mydriatic," which was discussed by Dr. Hiers.

On motion, the Association adjourned until 9 P. M.

SECOND DAY—EVENING SESSION.

The Association reassembled at the appointed hour, and was called to order by the President.

Dr. J. C. LeHardy, of Savannah, read a paper on "Galvanism in Office Practice," which was discussed by Drs. Nicolson, Westmoreland, and in closing by the author.

Dr. J. B. S. Holmes, of Atlanta, contributed a paper entitled "A Report of Part of my Surgical Work for the Six Months Ending April 15th, with Remarks," which was discussed by Drs. Hopkins and Westmoreland.

On motion, the Association adjourned until Friday morning, 9 o'clock.

THIRD DAY—MORNING SESSION.

The Association met at 9 A. M., and was called to order by the President.

Dr. Hopkins: There is a good deal of unpleasantness that might arise from the discussion of Dr. Ridley's paper, and I desire to present the following resolution:

WHEREAS, An erroneous impression, growing out of the discussion of Dr. Ridley's paper, has been created regarding the State Insane Asylum, which is calculated to affect unpleasantly that institution, be it

Resolved, That the Georgia Medical Association hereby indorses the management of said Asylum.

Seconded.

Dr. Benedict: It seems to me that the wisest way to settle this matter is that we ask the newspaper reporter to let us put headlines to the article. I do not think a resolution is necessary.

Dr. Ridley: As a matter of personal privilege, I desire to reassert what I endeavored to plainly state in my paper yesterday, that in it I meant in no sense a personal reflection on Dr. Powell. The garbled newspaper reports I have not read closely, but I think it is only proper that I should make the statement in justice to myself.

The President then called for the reading of the newspaper report, and the garbled paragraph was read.

Dr. Hurt: I move as a substitute that it is the sense of this Association that we regret the misconstruction and badly garbled report contained in the newspaper in refer-

ence to Dr. Ridley's paper and the discussion thereon; that we cannot understand that there is any reflection upon the officers of the institution.

After further discussion, Dr. Hurt withdrew his substitute.

The President: It seems to me we are making a great deal out of a very small thing. I should certainly dislike to see this Association under any circumstances indorse any institution, no matter how thoroughly its management may be carried out. In regard to the remarks which appeared in the newspaper and purported to have come from me, I desire to say that the publication of the official stenographic report of the discussion is all that is necessary, and I will ask the stenographer to transcribe his notes and give the transcript to the reporter, so that the necessary corrections may be made.

There being no further discussion, the President put the motion of Dr. Hopkins, which was lost.

Dr. Goodrich read a letter from Dr. F. M. Brantley, and on motion of Dr. Howell, Dr. Brantley was reinstated and his name put on the honorary list.

The Board of Censors reported favorably on further applications for membership, and, on motion, the applicants were declared duly elected.

The Board also made the following report relative to the case of Dr. W. L. Bullard:

Your Board of Censors, after careful consideration of complaints brought before us of the violation of the Code of Ethics by Dr. W. L. Bullard, of Columbus, Ga., a specialist on the eye, ear, nose, and throat, beg to submit the following report, viz.:

First. That he is in open violation of the Code by advertising through the secular papers, giving cuts of his patients before and after operating, by calling attention in printed matter in said papers to the success of his work and offering to the members of a certain convention to treat any or all of them with his compliments.

Second. That we are informed that his attention has heretofore been called to these violations. We therefore decide that his action is in vio-

lation of the Code, and that his name be dropped from the list of membership.

W. O'DANIEL, Chairman,
J. G. HOPKINS, Secretary,
W. H. DOUGHTY,
F. M. RIDLEY,
C. D. HURT.

On motion, the report of the Board of Censors was adopted by the Association unanimously.

Dr. T. M. Greenwood, of Mineral Bluff, read a paper entitled "Obstetrics as Practiced in the Mountains of North Georgia," which was discussed by Drs. Holmes, Taliaferro, Love, Moore, and in closing by the author of the paper.

Dr. Hopkins: You are all aware that the *Journal of the American Medical Association* is in the habit of inserting in its columns advertisements of proprietary medicines and of fake sanitariums as well. The Philadelphia County Medical Society has called my attention to it and requests that the matter be brought before this Association in order that some action may be taken. At the Detroit meeting of the American Medical Association in 1893, the attention of the trustees was called to the violation of the Code, and they instructed the Publishing Committee to insert no advertisements unless they were accompanied by the formulæ. It is reasonable for us to suppose that the Publishing Committee is in possession of the formulæ. If they are, they should publish them or not publish the advertisements. The *Journal* is not the property of the Publishing Committee or the Trustees. It belongs to this and other associations of the country, and as individual subscribers to the *Journal*, or as members of the Association, we are entitled to know these formulæ. It is asserted by them that it is a matter of financial necessity. There is a violation of the Code in accepting and publishing these advertisements without giving the formulæ. We know the Code is not perfect and it should be amended, but just

how it is not my place to say, but as long as we are members of associations which have adopted that Code for our guidance we should live up to it in the strict letter and spirit of the language just as any other organization. I desire now to introduce the following resolution:

WHEREAS, The Medical Association of Georgia is in affiliation with the American Medical Association, having adopted and being guided by the Code of Ethics of that body; and

WHEREAS, *The Journal of the American Medical Association*, the official organ of said Association, is being used as a means of "promoting the interests" of secret nostrums and charlatan institutions; therefore be it, by the Medical Association of Georgia, in session assembled at Savannah, this 18th day of April, 1895,

Resolved, That in permitting such a course the American Medical Association is doing violence to the Code of its own creation.

Resolved further, That if this procedure is a financial necessity, as claimed, then it were better that the Association return to the old method of issuing the transactions annually in book form.

Resolved further, That a copy of these resolutions be sent by the Secretary of this Association to the Secretary of the American Medical Association prior to its next regular convention.

Unanimously adopted.

Dr. Howell moved that the resolution be laid on the table.

Seconded.

Dr. H. B. McMaster offered as a substitute that it be adopted, which was carried.

On motion of Dr. Hurt, the further reading of papers was dispensed with, to hear the reports of committees.

The Auditing Committee made the following report:

Gentlemen: We, the undersigned committee, appointed to examine the reports of the Secretary and books of the Treasurer, find the proper vouchers, and the books correctly and neatly kept, with a balance of $768.51 now in the hands of the Treasurer.

We further recommend that the Secretary and Treasurer be paid $100 each for their services, and that the stenographer be paid $180 for his services. We recommend further that in future cuts or illustrations of papers shall be paid for by the authors of the papers.

R. D. MCLEOD,
WM. PERRIN NICOLSON,
F. M. RIDLEY,
Auditing Committee.

On motion, the report was adopted.

Dr. Moore offered the following amendment to the Constitution:

Resolved, That section 4 of article 5 is hereby repealed, and that section 5 shall become section 4.

Laid over for one year.

At this juncture the President appointed delegates to the American Medical Association, viz.:

F. Willcox McRae.....Atlanta.
J. McFadden Gaston.....Atlanta.
T. D. McKown.....Chickamauga.
W. D. Standifer.....Blakely.
Henry R. Slack.....LaGrange.
Charles Dunbar Roy.....Atlanta.
I. H. Goss.....Athens.
M. A. Baldwin.....Cuthbert.
A. G. Whitehead.....Waynesboro.
E. C. Goodrich.....Augusta.
D. R. Dorster.....Blakely.
S. Latimer Phillips.....Savannah.
T. M. McIntosh.....Thomasville.
W. H. Doughty.....Augusta.
Wm. O'Daniel.....Bullard.
F. M. Ridley.....LaGrange.
V. O. Hardon.....Atlanta.
A. W. Calhoun.....Atlanta.
J. W. Bailey.....Gainesville.
Montague L. Boyd.....Savannah.
J. M. Crawford.....Atlanta.
W. L. Dean.....Woodstock
W. H. Elliott.....Savannah
T. R. Garlington.....Rome.
A. W. Griggs.....West Point.
E. P. Ham.....Gainesville.
L. G. Hardman.....Harmony Grove.

J. B. Herrman.....Eastman.
A. G. Hobbs.....Atlanta.
W. C. Humphries.....Acworth.
W. C. Maloy.....Rhine.
H. McHatton.....Macon.
R. D. McLeod.....Lyons.
W. W. Owens.....Savannah.
C. H. Richardson.....Montezuma.
J. L. Selman.....Douglasville.
W. F. Sibbett.....Broxton.
A. A. Smith.....Hawkinsville.
Geo. A. Stone.....Savannah.
W. F. Westmoreland.....Atlanta.
V. H. Taliaferro.....Atlanta.
Eugene Foster.....Augusta.
C. W. Hickman.....Augusta.
C. R. Cortelyou.....Marietta.
Louis H. Jones.....Atlanta.

He also appointed the following committees:

Committee on Asylum.—Wm. A. Love, R. E. Griggs, W. O'Daniel, R. B. Barron, F. M. Ridley.

Committee on Inebriates.—Holt of Macon, Hurt of Atlanta, and Moore of Macon.

The hour having arrived for the election of officers, it was proceeded with, and the elections resulted as follows:

President, Dr. Frank M. Ridley, LaGrange.

First Vice-President, Dr. W. H. Doughty, Jr., Augusta.

Second Vice-President, Dr. M. L. Boyd, Savannah.

Secretary, Dr. R. H. Taylor, Griffin.

Treasurer, Dr. E. C. Goodrich, Augusta.

Censors, Dr. Chas. Hicks, Dublin; Dr. H. B. McMaster, Waynesboro, and Dr. H. J. Williams, Macon.

As soon as Dr. Ridley was declared elected President of the Association, he was called on for a speech, and said:

Mr. President and Gentlemen:

It occurs to me that no honor can come to a physician in the State of Georgia which compares with this which you have conferred upon me. Taking this view of it, the compliment you pay me impresses me with the profoundest sense of gratitude. In accepting the trust, I promise you that I shall bring my best efforts to bear upon the discharge of my duties. I shall serve you with my very best ability, with strict impartiality, and in such a way altogether that I may deserve at your hands a year from to-day that eminent applause which is voiced in the sentiment, "Well done, thou good and faithful servant." [Applause.]

Dr. Taylor was called for. He said:

I have only to say that any office within the gift of this body might be accepted by any member of this Association, and he should feel honored in that acceptance. I thank you for the confidence you have reposed in me, and I assure you I will do the best I can for the good of the Association.

Dr. Ridley offered the following resolution:

Resolved, That the Medical Association of Georgia, having learned of the death of Dr. Wall, a prominent physician and yellow fever expert, of Tampa, Fla., while reading a paper before the Medical Association of that State at Tallahassee, that we as a body express our deep regret and sympathy with the medical fraternity of Florida in the loss of Dr. Wall, and that we also extend our sympathies to his family.

Seconded and unanimously carried.

Dr. Doughty extended an invitation to the Association to hold its next meeting in Augusta, which was accepted.

Dr. Westmoreland, in turning over the office of President to his successor, said:

In retiring from this office, I desire to thank you one and all for your courteous treatment, and it gives me pleasure to install your newly elected President, Dr. Ridley.

The First and Second Vice-Presidents were also presented to the Association, and made brief, timely speeches:

The following papers were read by title:

1. Some Observations with regard to the Treatment of Typhoid Fever, by Dr. A. C. Davidson of Sharon.
2. The Cause and Treatment of Corneal Ulcers, by Dr. S. Latimer Phillips of Savannah.
3. Obstetrics in Vienna, Austria, by Dr. Wm. B. Gilmer of Macon.

4. The Topical Treatment of Chronic Circumscribed Eczema, by Dr. Bernard Wolff of Atlanta.
5. The Surprises We Meet in Abdominal Surgery, by Dr. Seth N. Jordan of Columbus.
6. Backbone as a Mental Antiseptic, by Dr. J. S. Wimberly of Sanford.
7. A Remarkable Case of Ruptured Ectopic Pregnancy, Late Operation, Recovery, by Dr. George H. Noble of Atlanta.
8. Gonorrhea, Its Effect and Treatment in the Female, by Dr. J. W. Bailey of Gainesville.
9. Nephroptosis, Its Causation, Treatment and Relation to Many Obscure Symptoms in Women, by Dr. W. W. Stewart of Columbus.
10. The Use of Strychnine in Obstetric Practice, by Dr. Jos. Eve Allen of Augusta.
11. Placenta Previa, Report of a Case, by Dr. M. L. Currie of Alley.
12. A Rare Intestinal Tumor, by Dr. L. G. Hardman of Harmony Grove.
13. Cancer of Pancreas, by Dr. V. H. Taliaferro of Atlanta.
14. Report of Six Interesting Cases from My Obstetrical Practice, by Dr. E. R. Anthony of Griffin.
15. Some rare Cases in Obstetric Practice, with Especial Reference to the Treatment, by Dr. E. H. Richardson of Montezuma.
16. Diathesis an Important Factor in Diagnosis and Treatment, by Dr. W. E. Adams of Madison.
17. A New Method of Examining the Rectum, by Dr. R. R. Kime of Atlanta.
18. Uremic Poisoning as a Result of Albuminuria in the Parturient State, by Dr. A. A. Smith of Hawkinsville.
19. Mind and Body, by Dr. Chas. S. Webb of Atlanta.
20. The Limits of Conservatism in Pelvic Pus Cases, by Dr. Ross P. Cox of Rome.
21. A Ready Method of Resuscitation in Suspended Animation, by Dr. P. L. Hillsman of Albany.
22. Exarticulation of Hip and Shoulder Joints—Report of Cases, by Dr. F. M. Ridley of LaGrange.
23. Management of Obstetrical Cases, by Dr. Thomas D. Love of Atlanta.
24. Mental Suggestion as an Aid in the Treatment of Morphinomania—Cases in Evidence, by Dr. Samuel H. Green of Oakdale.
25. The Modern Obstetrical Practice, by Dr. C. D. Hurt of Atlanta.
26. The History of Medicine and Surgery in Georgia, by Dr. Luther B. Grandy of Atlanta.
27. Hæmophilia, by Dr. A. W. Griggs of West Point.
28. Report of some Unusual Cases in Abdominal, Gynecological and Obstetrical Work, by Dr. K. P. Moore of Macon.

29. Nasal Sprays—What Solutions to Use, by Dr. George Brown, of Atlanta.
30. Stone in the Bladder, by Dr. W. S. Elkin of Atlanta.
31. Uterine Fibroids, by Dr. J. G. Earnest of Atlanta.

Dr. Ridley offered the following resolution:

Resolved, That the Medical Association of Georgia tenders its grateful acknowledgments to the members of the profession and citizens of Savannah for their kind and hospitable entertainment.

Unanimously adopted.

There being no further business, the Association, on motion, adjourned to meet in the city of Augusta on the third Wednesday in April, 1896.

After adjournment, a steamboat excursion was given the members and their friends down the Savannah river to the Atlantic ocean, and an "oyster roast" was relished on Wilmington Island.

ANNUAL STANDING COMMITTEES.

Committee on Publication.

Dan H. Howell.....Atlanta.
C. D. Hurt.....Atlanta.
V. H. Taliaferro.....Atlanta.
E. C. Goodrich.....Augusta.
R. H. Taylor, Secretary *ex officio*.....Griffin.

Committee on Necrology.

W. A. Love, Chairman.....Atlanta.
T. D. McKown.....Chickamauga.
W. H. Elliott.....Savannah.
A. A. Smith.....Hawkinsville.
R. D. McLeod.....Lyons.

Committee on Correspondence for New Members.

E. R. Anthony.....Griffin.
M. A. Baldwin.....Cuthbert.
J. G. Hopkins.....Thomasville.
T. R. Garlington.....Rome.

Committee of Arrangements.

E. C. Goodrich, Chairman ..... Augusta.
W. H. Doughty, Jr ..... Augusta.
Eugene Foster ..... Augusta.
J. M. Hull ..... Augusta.
J. B. Morgan ..... Augusta.

Committtee on Prize Essay.

Dunbar Roy, Chairman ..... Atlanta.
Geo. H. Noble ..... Atlanta.
A. W. Griggs ..... West Point.

Committee on Program.

Louis H. Jones ..... Atlanta.
W. S. Goldsmith ..... Atlanta.
V. O. Hardon ..... Atlanta.
L. G. Hardman ..... Harmony Grove.
J. A. Dunwoody ..... Brunswick.
Howard J. Williams ..... Macon.

FRANK M. RIDLEY, M.D.,
President.

R. H. TAYLOR, M.D.,
Secretary.

PRESIDENT'S ADDRESS.

Gentlemen:

In our forty-sixth annual session allow me to return you my sincere thanks, not only for your kindness and confidence in having placed me in the position to deliver this annual address, but to also thank you for your hearty co-operation and support, as evidenced by the large attendance and the numerous scientific contributions that appear on our program.

Our Association is now nearly half a century old, and only a few of the original members remain with us, and each year we notice that a loved face is absent and learn that an honored friend has passed from our midst to return no more. But with each spring our Association comes forth from its rest with a renewed vigor and greater capacity for doing good work.

Within the lifetime of this Association the history of medicine has been revised and the better part of surgery written, and every subject pertaining to medicine has broadened out under the influence of the broader ideas and greater diffusion of knowledge, empirical medicine and surgery has almost disappeared, and that period when a great man's *ideas*, whether *correct* or not, was the standard he and his followers had for a guide has passed away. The days when the history of medicine and surgery was written in characters of blood, full of murders by authority and mistaken ideas, and when people were allowed to die and many more killed by unjustifiable bigotry and bungling, have gone to stay. Medicine and surgery has made wonderful progress, especially under the modern pressure

towards a division of labor, and the tendency of all human efforts to focalize itself on special lines. And the good old-timers, who pulled a tooth, dosed you for insanity, cut off a leg or nursed your horse, under the open sesame of medicine, when the glory of it was not that they did either well, but that they attempted all, are a thing of the past. But all this era of the past was a period of necessity in the history of medicine and surgery—an era in which they underwent the generating process which culminated in the birth of modern scientific medicine.

Under this modernizing influence scientific methods of research are carried out by trained observers in well equipped laboratories in every civilized country, and under these careful and patient investigations the misty surroundings in the causation of disease have begun to clear.

Medicine in its wonderful progress has outgrown the individual capacity of any one, and has resulted in an elaborate division of labor and the permanent and beneficial establishment of specialism, and able men, by using their talent and genius along special lines, by their co-operative work, have established the solid basis of the medicine and surgery of to-day.

The specialists have had to bear the brunt of a great deal of unjust criticism. They have frequently, particularly in certain communities, been censured as a class when the censure was only merited by individuals. Unfortunately, there are medical men who use the broad cloak of specialism to cover the most outrageous charlatanism, and in this respect the field of gynecology presents more rank growths than any other. Particularly is this true of those gynecologists, who, like the toad-stools, spring up in a night. A. G. P. (general practitioner) of G. yesterday, and a gynecologist with private infirmary attachments of Y. to-day; gynecologists who prefer a glass bottle instead of a woman's abdomen for normal ovaries, and celiotomists who close

up the abdomen in cases of diseased ovaries with attachments and call the case inoperable. With these men the halcyon days of medicine will never arrive; but so long as a baby is born with every throb of the human heart, and so long as these living jewels dropped unstained from heaven are in the proportion of one hundred females to ninety males, so that between two and three million more girls are born into the world each year than boys, this mushroom growth will retain its popularity and vantage seat. For as the All Powerful, in that infinite wisdom that remains invisible to the human eye, has created the eatable as well as the poisonous mushroom, so he has probably created the two classes of gynecologists, that the proportion of females to males shall be reduced to the same ratio. However, the most rapid progress has been in general surgery, and by general surgery I mean to include all those blossoming branches so rich in their perfect beauty that have grown from the parent tree. Modern surgery has developed within the lifetime of this Association. A few years before its organization, in the upper portion of this State, there resided a country physician, a representative of that class of honest, earnest workers, who, from the vicissitudes of fortune, have plucked the courage to endure and the inspiration to strive; one of those physicians whose life is full of tears and sunshine, who is surrounded by pains, care, and anxiety; a man who ever proved a friend, comrade, counselor, and guide; a physician for whom God Almighty fashioned a nature of divine possibilities. This physician, Dr. Crawford W. Long of Jefferson, Ga., by his discovery of anesthesia and his successful use of ether in an operation on March 30, 1842, revolutionized surgery and started it upon is most progressive era.

URINARY ANALYSIS.

BY LOUIS H. JONES, A.M., M.D., ATLANTA.

No secretion or excretion, no tangible state or condition of the body so accurately shows the daily variations in waste and nutrition as the urine. Accepting this fact, the importance of frequent and careful examinations of the urine can scarcely be overestimated, and we must class its careful study in clinical medicine as an absolute essential to correct diagnosis and rational therapeutics.

Fortunately the rapid strides made in physiological chemistry, and the more general use of the microscope, afford us means for determining the composition of the urine with great accuracy and a minimum amount of labor.

No greater mistake can be made than to assume that the condition of the urine is an index to the state of the kidneys alone. Disorders of the brain, the liver, the heart, the stomach, alike tell their tale in altered conditions of the urine. Indeed, it would not be going too far to say that no considerable departure from the normal could exist for any length of time in the human organism without such change being recorded by either a pathological condition of the urine or a decided variation from its normal physiological state.

It is, however, my intention to discuss only the most reliable and simple methods of detecting such changes, and to point out a few of the sources of error present in some of the methods in common use.

There are in making an examination of the urine four

points *usually* determined, viz., reaction, specific gravity, and the presence or absence of albumin and sugar. To these should always be added a knowledge of the amount passed in twenty-four hours, and the quantity of urea present, and where there is reason to suspect disease, or where the chemical analysis indicates it, the microscope should always complete the work.

The *reaction* can be readily determined by means of litmus paper, the only point worthy of consideration being, in the event of an alkaline reaction, to know whether this represents the state of the blood, or whether it is due to fermentative changes by means of which the urea has been split up with the formation of ammonium carbonate. Should this be the cause of an alkaline reaction, the litmus paper will regain its red color upon drying and warming. This knowledge is valuable for the reason that the presence of a *volatile* alkali in freshly voided urine is almost invariably associated with a diseased condition of the bladder.

Grave pathological conditions are often indicated by considerable variation from the normal of specific gravity. The urinometers in common use I have found to be exceedingly unreliable, different instruments giving, with the same specimen, variations ranging from two to six points. This fact, together with the error arising from variations in temperature, and the fact that the specimen examined may not represent an average of the twenty-four hours, makes the specific gravity as often obtained of but little diagnostic value.

The chemical tests generally made of the urine are a reproach alike to the chemist and the physician. What is to be desired are tests which are reliable under all ordinary conditions, which can be made without the consumption of too much time, and which require a minimum amount of skill for their proper performance. It behooves the profession to find such methods, and having found them to

adopt them to the exclusion of all less reliable and uncertain means. It shall be my aim not to discuss the many useless and tedious processes advocated from time to time, but to give the results of my experience with a view to eliciting from those present such criticism and additional information as they may deem profitable.

For the detection of albumin, no less than twenty or thirty distinct tests have from time to time been warmly advocated. For many of these extreme delicacy has been claimed; for some justly so, but frequently at the expense of reliable and trustworthy results. What is to be desired is not increased delicacy, but greater certainty in our methods. It is generally conceded that the presence of a minute quantity of albumin in the urine is of but little diagnostic value, and that upon its existence *alone* renal disease cannot be predicated. The oldest and by far the most commonly used test is the heat and nitric acid test, and yet it is subject to many sources of error, and among its advocates there is much disagreement as to the best method of applying it. At best it is liable to give rise to two errors: first, in highly concentrated urines we will often obtain a precipitate of urates upon the addition of either nitric or acetic acids. This is due to the fact that the normal urates present in the urine are converted by the acid into acid urates, which being more or less insoluble, are precipitated out as a diffuse cloudiness. Take any urine with a specific gravity of 1030, or more, and the acid may give this result. In the next place, mucin is precipitated by nitric acid, and in all cases where there is any considerable amount of mucus the acid will yield results that are unreliable. It is true that the precipitate due to the presence of albumin differs somewhat in appearance from that caused by mucin and the urates, yet this difference may not be detected by the eye of the unpracticed, and is liable to cause a mistake. We know that albuminous urine has, as

a rule, a low specific gravity, and yet we often see reports of cases where the specific gravity is high and there is reported a trace of albumin. Now, in a highly concentrated urine the mucin is necessarily present in an appreciable quantity, and would, with either nitric or acetic acid, give results which might readily be mistaken for a slight albumin reaction. This can be avoided by first adding to the urine to be tested a solution of sodium chloride or of potassium ferrocyanide, either of which, if mixed with the urine *prior* to the addition of the acid, will prevent precipitation of mucin or urates. Personally I am partial to the ferrocyanide, and have adopted this test for routine work to the exclusion of all others. It has to commend it both simplicity and reliability. It is made by adding to, say, eight grammes of urine about six grammes of a solution of potassium ferrocyanide (strength 1 to 20), and then adding one gramme of acetic acid, when, if albumin be present, a distinct cloudiness will appear throughout the mixture.

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Heller's test with cold nitric acid is preferable to the heat and nitric acid test, but possesses substantially the same objections, though in a less degree.

Where minute traces of albumin are suspected, or where doubt exists after the use of a test, the potassio-mercuric iodide may be used. This test, though subject to error, is exceedingly delicate, and may act as a check in doubtful cases, for where it gives a negative result we may feel sure of the absence of even a minute quantity of albumin. However, so little diagnostic value attaches to slight traces of albumin that extreme delicacy is rarely useful. The absolute amount of albumin present is, from a clinical and diagnostic standpoint, of minor importance, and we believe in a given case that the comparative amounts present from day to day, or week to week, is in the vast majority of cases all that will be required.

I especially desire to call attention to the fact that often much unnecessary confusion is brought about by speaking of the percentage of albumin found in a given specimen of urine. As a matter of fact the actual *weight percentage* of albumin present in urine never exceeds three to four per cent. and rarely exceeds one per cent., and yet it is common to hear of urines containing from fifty to seventy-five per cent. of albumin, reference being had to the bulk of the precipitate formed, usually with heat and nitric acid. This must necessarily depend much upon the time allowed for settling, and is wholly inaccurate and unscientific.

The methods of detecting sugar in the urine are numerous. Quite a number are based upon the fact that grape sugar in a strongly alkaline solution will, especially when boiled, reduce cupric oxide to cuprous or suboxide; this is the principle involved in Trommer's test and in the use of Fehling's and Haine's solutions. All things considered, these tests furnish us the best working test available. They are open to the objection that other substances sometimes present in urine will exert a like effect upon the copper salts, and this is especially true in tests requiring the use of a large amount of urine, as in Trommer's test. The use of Fehling's solution has the great disadvantage, that owing to the presence in it of Rochelle salts, it is unstable, and unless freshly prepared is altogether unreliable. Haine's solution, the formula of which is two grammes of pure sulphate of copper dissolved in half an ounce of distilled water, then mixed with half an ounce of pure glycerine and five ounces of liquor potassa added, is stable and keeps indefinitely without change. About four grammes of this solution in a test tube should be brought to a boil and five to ten drops (never more) of urine added; it should then be again boiled for half a minute when, if sugar be present, a precipitate of the red suboxide of copper is formed. The small

quantity of urine used in this test practically does away with the reduction of the copper salts by any other substance than the grape sugar, and if properly conducted affords a simple and reliable test.

Boetger's test with bismuth is favored by some, but the salt is blackened by other substances than sugar, notably sulphur, and for this reason if albumin be present it must first be removed before adding the bismuth. Moreover in all highly colored urines, the bismuth is more or less darkened and may give rise to doubt as to the presence of small amounts of sugar. The fermentation test sometimes used, requires too much time and is moreover entirely useless when sugar is present in small amounts, inasmuch as the urine will dissolve more or less carbon-dioxide and yield negative results. For detecting small quantities of sugar, the phenyl-hydrazin test is delicate and reliable, and its use applicable in every variety of urine. It requires time and considerable care for its performance, and is not suited to the needs of the busy practitioner.

The determination of urea is a matter much neglected, and yet a knowledge of the amount excreted is oftentimes of much value, and especially so from a prognostic standpoint. In cases of chronic interstitial nephritis, the daily loss of urea is a reliable indication of the manner in which the kidneys are performing their function, and a decided lessening of the amount may enable us to predict uræmic symptoms, which would otherwise have been a surprise. With the aid of the little instrument of Dr. Doremus, the urea may be quickly determined with sufficient accuracy for all practical purposes. Such other pathological substances present in urine, as pus, blood, etc., can be most quickly and surely detected by means of the microscope.

Before closing I desire to call attention to the centrifugal method of obtaining urinary sediment for microscopic

examination. By means of a small electric motor (designed by Dr. C. W. Purdy), carrying two arms with tubes attached, and which can be run by a small battery, the urinary sediment may be obtained in a few minutes, thus avoiding the twelve to twenty-four hours delay occasioned by waiting for the sediment to collect in the bottom of the tube, and possesses the additional advantage of yielding a sediment free from and unaffected by the results of fermentation.

SOMETHING NEW IN THE TREATMENT OF WOMEN AFTER CONFINEMENT.

BY R. J. NUNN, M.D., SAVANNAH.

It is, of course, well known that women living in a condition most nearly approaching to a state of nature do not require the "days of lying up" after confinement, nor do they keep them, as do the more civilized races or the cultivated classes of society.

Even among those living most luxuriously, there will occasionally be found females who, after delivery, return with extraordinary rapidity to their usual conditions of health; but, on the other hand, there are those upon whom child-bearing seems to produce a very serious impression, and therefore, it becomes a question, of no less scientific interest than economic importance, to indicate some means by which these weaker and more tardy recuperators can be put upon an even footing with their hardier and more vigorous sisters.

Is it not possible, with the means placed at our command by modern science, to shorten the time of the "getting up" and to improve the condition of the parous woman?

Such is the question that our investigators should answer. To this there should be some reply. Perhaps science has not yet arrived at a point where it can answer satisfactorily, but at least it can show that it is alive to the importance of the question.

The difficulty of finding a suitable subject for experiment must not be overlooked, for of course, no one would think for a moment of making a woman an unwilling vic-

tim to such an investigation; but to many there fall cases like the following, in which a practical examination of this subject might be of great value, not alone to science, but also to the individual:

The subject of these notes was a multipara, who, after the birth of her first child, had suffered with prolapsus, accompanied with cysto and rectocele, continual backache; was generally puny, miserable and run down, and was at best a small, weakly woman, but withal a most determined character, as will be seen later.

One Sunday morning the patient was delivered, and immediately expressed her determination of going to work on the next day (Monday). No persuasion could change her resolution.

Being a widow, she declared it to be a question of bread for herself and her children, and she concluded she might as well die one way as another. It was to her a question of work or starvation.

Under these circumstances it was determined to adopt the following method of treatment: Twice daily the patient was to use a douche of a warm solution of boracic acid, immediately after which she was to report at my office; here the uterus would be thoroughly cleaned out with aseptic water and swabbed out with camphenodine (camphor, iodine, and carbolic acid), the faradic current used with a vaginal electrode, a tampon applied, and moreover, an abdominal bandage was to be constantly worn.

The treatment was carried out for about two weeks, after which it was gradually discontinued, and in about a month the patient was discharged, apparently cured, not having had a single untoward symptom, and declaring that her recovery had been better than after her first confinement, when she kept her bed ten days.

Since this course of treatment, which is now several months ago, she has been continually at her work, not

having missed a day; enjoys better health than for years before, and considers herself cured of her prolapsus.

That this case has been of exceeding interest to me is my only apology for bringing it before the profession.

As a guide to any one desiring to make further trial of this method of treatment, it may be well to recapitulate the principles upon which it is founded, which are: (*a*) thorough antisepsis, (*b*) effective internal and external support, (*c*) local stimulation to hasten involution of the uterus and the return of other overstrained parts to their normal condition, and (*d*) where necessary, the use of such appropriate general medication as may be indicated.

THE PROPER CARE OF SCHOOL CHILDREN'S EYES—THE NECESSITY.

BY DUNBAR ROY, A.B., M.D., ATLANTA.

"An ounce of prevention is worth a pound of cure" is an old adage, yet the triteness of its meaning is appreciated in every domain of medicine. Hygiene and preventive medicine have, in the last few years, taken a strong hold upon the profession and public at large, and each day do we read publications from those who are their strongest advocates. That there is a reason for this every one must admit who keeps informed of the progress made in every department of medicine. Pathological anatomy and bacteriology have revealed to us the cause of many diseases which before remained obscure, and likewise in their revelations have they afforded us a more rational method of treatment. As we are thus better enabled to arrive at the root of every disease, so are we more capable of dispersing the germs of the same before they have been firmly implanted in the human system.

Why do we erect our quarantine stations, if it is not to keep our country free from the ravages of some exotic disease?

Why is it that the hygiene of our public places is now exciting such widespread and deep attention, if it is not through the fear that some lurking bacillus tuberculosis may claim an innocent victim as its own?

Why is it that the mother alone watches by the bedside of her little darling, who is tossing amid the pain and fever of some infectious or contagious disease—some enemy of

childhood—while all the rest of the world stands at a distance, if it is not through the fear that the same disease may implant its fangs upon some member of its own household?

Why, then, is all this care and solicitude, if it is not to keep the body in a healthy state for fear that it may be seized upon by some lurking malady?

Is not the proper regulation of our diet, the deglutition of our food, the attention to the calls of nature, absolutely necessary for the well-being of our bodies?

Every organ, strictly speaking, is a distinct entity, but its function to be properly executed requires the harmonious action of all, for the derangement of one impairs the usefulness of another. In the eyes of many the importance of any organ in the production of disease is largely dependent upon its size and the "current fad" of the medical age. How many of our ailments are often attributed by Southern practitioners to that one organ—the liver? How often is a woman made to believe that her whole organization consists solely of a nervous system and two ovaries? Alas! how often would the enthusiastic ophthalmologist make us believe that refractive errors and muscular anomalies are the most potent factors in the cause of every obscure nervous affection?

But in all extreme measures there is a germ of truth. There must be the proper supervision over every organ of our body, if we wish the greatest good to accrue through the activity of the same; for, unless the proper care be exercised, then disease is very apt to follow.

If there is a tendency to cardiac hypertrophy, are we going to allow our patients to indulge in undue muscular exertion or stimulation? If there is a lack of the digestive ferments in the alimentary tract, shall we allow our patient to partake of a Welsh rarebit every night before retiring? If there is a weakness of the vocal chords, are we to allow the inordinate use of the same?

With this preface before you, I wish to speak for a few moments in reference to the proper care of school children's eyes, to show you the necessity for the same, and in this manner make manifest to our Association the importance of the subject. Let me say in the outset that I am no extremist, no crank upon the importance of the eye in the causation of many reflex troubles, but there are certain ocular conditions which are frequently overlooked by the general practitioner, yet to the thoughtful ophthalmologist must be seen to exert a most decided influence upon the general health of the individual. The eye is a minute organ in comparison to the rest of the human frame, yet without it the very soul-life of our body were extinct! It is in relationship to our whole nervous system, and active as it is during every moment of our waking hours, one readily conjectures what an influence it could exert in many of our reflex troubles. It is only in the last few years that the attention of the profession has been prominently directed to the eye, as a cause for many of the nervous phenomena which arise in the human body, and to the importance of a thorough examination of the same to fortify them in their diagnosis. The subject is indeed important, and every day do we see the ophthalmic journals teeming with statistical reports upon the examination of school children's eyes, until now even the laity cannot feign ignorance of the matter.

That you may more readily understand the point to which I am alluding, I will state clearly the proposition which shall be discussed, and which I wish to impress upon the medical profession of Georgia in order that at no late date, steps may be taken for the proper rectification of the errors which shall be pointed out. My proposition is this: There are too many children in our schools between the ages of six and twenty who are using their eyes to the detriment of the same, in that there exists some refractive error as far-sightedness, near-sightedness, or astigmatism,

which should be corrected before any undue strain is put upon these visual members. These uncorrected errors produce many reflex disturbances in the body which are often attributed to some other cause—as digestive, uterine, or even to defective sanitary conditions of the schoolrooms. Not only are extraneous symptoms—as headaches, nervousness, etc.—produced, but changes in the eye itself occur, which, if not noticed and corrected early, may go from bad to worse until there is a permanent injury to some portion of the globe.

The subject of the care of school children's eyes has been much more extensively studied in Europe, especially in Germany, than it has been in America; but of late our American confrères have been actively engaged in bringing it prominently before the profession of our own country.

As to what is the normal or emmetropic eye is a point by no means settled among the best ophthalmologists. From numerous observations it has been found that the large majority of eyes of infants are hyperopic or far-sighted, and that the tendency with increasing years is rather in the direction of myopia or near-sightedness than in an increase in the hyperopia. For instance, Ely, in the examination of the eyes of 111 infants, found hyperopia in sixty-nine per cent.; while Keonigstein, in Germany, in the examination of 281 infants, found hyperopia in 98 per cent. Since the above observations have been made, numerous other examinations have, in a large measure, confirmed these statements. On the other hand, statistical observation among school children has revealed the fact that with increasing years, and therefore, increased mental work, the tendency of the eyes is towards myopia or near-sightedness, even passing into that refractive error from low degrees of hyperopia. Myopia is looked upon by some as a product of civilization. Such writers hold that among the aboriginal Indians and savages myopia is unknown,

and that it is found more frequently as we ascend the scale of intelligence, or where there is a greater demand upon the eyes for close application. For instance, in Germany it is remarkable, and frequently commented upon, the number of people one sees wearing glasses, and nearly entirely for myopia, due in a large measure, as statistics show, to the increased ocular strain necessitated by the advancement in studies.

In the first place is myopia or near-sightedness an abnormal condition of the eye, and if so, does it impair the real value of the visual member?

To consider for a moment that myopia is not recognized by you as an abnormal and pathological condition of the eye would be a reflection upon your intelligence; so passing that by without further comment, let us consider the latter part of the proposition in regard to the impairment of its function when myopia exists. An eye that is the most comfort to its possessor is one which never occasions a cognizance of its presence. Not so with the myopic eye, for besides interfering with the clear perception of the objects around us, which in itself is a great deprivation, it frequently causes pain and discomfort even when at rest, and much more so when brought into activity. Besides, if the error be left uncorrected, an increase in the myopia is sure to follow, and with that changes may occur in the interior of the eye which may finally lead to a permanent impairment of the sight.

This, I assure you, gentlemen, is no idle fancy but a fact borne out by every-day clinical experience. A myopic eye is always a menace to its possessor, a circumstance alone which would lead to the proper correction of the error.

In the second place, if it can be shown by statistics that myopia increases among school children as they advance to higher grades, should not some measures be taken by

which this increase may be minimized? The statistics of school children's eyes compiled in Germany, and also in America, are too familiar almost to warrant comment, but for the sake of those who are not so conversant with them, I will mention some statistical reports as justifying the statements which have been made, and also to substantiate my second proposition.

Since Professor Jaeger, of Vienna, in 1861 began the first scientific examination of school children's eyes, according to Dr. Kasper Pischl of San Francisco, there have been over 200,000 pupils in all parts of the civilized world examined, and all those investigations have proven that myopia stands in a direct relation to the education of the people. This same writer has examined the eyes of 1,900 school children in the public schools of San Francisco, and his investigations show that myopia had increased from 3.98 per cent. in the grammar school to 11.59 per cent. in the normal school.

France Motais, in *Recueil d'Ophthalmolgie*, after a careful examination of 5,000 students of schools and colleges in France, finds that myopia is acquired in 35 per cent. of the students of the most advanced classes. In the lowest classes he found none; in the intermediate 17 per cent. and in the advanced classes as stated above. He insists upon the extreme importance of adopting rigorous hygienic measures.

Professor Pfluger, in *Deutch Med. Zeitschrift*, has reiterated his complaint about the school system (in Switzerland), that myopia is exactly proportional to the number of hours of school work laid upon children, and quotes the results of Seggel's examination of 2,378 soldiers, that only 10 per cent. of the non-educated had myopia, while 60 per cent. of the student-soldiers were near-sighted.

Ramos-Vices, of Mexico, in an examination of 2,300 Mexican children of the lower schools, found myopia in

only 0.3 per cent., while among 5,000 in the higher grades he found 19 per cent.

De Mets, of Antwerp, has examined over 7,000 school children with the following result: Before the age of ten years 1.16 per cent. had myopia; after the age of ten years 3.10 per cent. had myopia. In well-lighted schools 1.63 per cent. of the scholars were found to be myopic, while in badly-lighted schools 3.73 per cent. of the scholars were myopic. He further says that bad light and increasing age, with increased demands made upon the eyes by study are powerful factors in the development and augmentation of myopia.

Statistics from such accurate observers as Cohn in Germany, Sulzer in Switzerland, Haskett Derby in Boston, and Risley in Philadelphia, agree almost unanimously with those which have been given more in detail above. The statistics which have been given are taken from observers in different countries in order to show that this myopic increase is not confined to any one race of people.

If such then be the facts, is it not our duty as medical men to call the attention of the various boards which govern our public and private schools to these statistical facts and endeavor as far as possible to make the school hygiene and regulations for the eyes as perfect as possible? The question of hygiene of the eyes has received far more attention in Europe than it has in our own country, but every day it is growing more in importance and more attention is being given it by ophthalmologists all over the land.

Besides the question of myopia, or near-sightedness, to which all eyes tend and which I have shown you increases among school children as they advance to higher grades, there is yet another phase of the subject which must demand as much sympathy and attention from us as does the question of myopia. It is the existence among school

children of unsuspected, and therefore uncorrected, errors of refraction, especially low degrees of hyperopia and astigmatism, which retard greatly the physical and mental advancement of the individual and causes school life often to be one of pain and mental lassitude. This point has been very forcibly brought before the profession in an article by Dr. W. F. Southard of San Francisco, read before the Ophthalmic Section at the last meeting of the American Medical Association, entitled "A Plea for the Examination of Every Child's Eyes when Commencing School," which was so timely throughout its extent that I shall take the liberty of presenting to you to-day some of the practical points therein contained.

Dr. Southard, in looking over the annual report of the public schools of San Francisco, found that there was an average daily attendance of 31,002 pupils between the ages of five and seventeen. Of this number 69.63 per cent. were in the primary grades, which included all children between the ages of five and ten years. 26.06 per cent. were pupils in the grammar grades, while but 4.31 per cent. were high school pupils. From these statistics Dr. S. calls attention to the fact that from the primary grades over one-half, or 50.43 per cent., fail to enter the grammar grades. At the close of the grammar grades 71.68 per cent., or more than three-fourths, fail to enter the high school. Is there then not a cause for surprise and alarm that only 4 per cent. of our primary pupils reach the high schools? Through inquiry from the superintendent of our public schools in Atlanta, I have ascertained that about 10 per cent. of the primary scholars enter the high school, a percentage somewhat higher than that found by Dr. Southard, but still a very insignificant number. That there must be some cause for this decrease is evident to all, and not only one but several factors by no means unimportant must enter into these results. It is true that when children

complete the primary grades they are often taken from school in order to become wage-earners for the family, yet this number must be very small, since at the age of ten or twelve a child is not a very prominent wage-earning factor. Another factor which has been adduced, and to my mind the most prominent in this decrease, is the inability of a large number of children to keep up in their studies, as can be ascertained from teachers and superintendents who are daily brought in contact with these pupils.

That there is a uniform brain capacity and power of comprehension among children is tacitly recognized by all educators, since text-books, hours for study, and graduation in schools have been arranged according to this idea. Why, then, is there not more uniformity in the results obtained, and why do we find so many children dropping out of school on account of their inability to keep up in their classes? If we inquire into the causes of this we will find that ill health is the chief factor. Many children enter school when they are almost invalids; many are made to enter before they are old enough, developing the mind at the expense of the body; many are physically impoverished from bad hygienic surroundings and insufficient food at home; many have inherited weak constitutions, all of which interferes materially with their brain capacity.

In this very class, if an examination was made, we would often find a diminished acuity of vision. But besides the weak and sickly, we often find scholars the brightest and the most healthy looking dropping out of the ranks of our public schools.

As Dr. Southard says, for the first term or two they experience no difficulty, but later dropping behind they become discouraged. Such scholars are inattentive and listless, they seem to have lost the powers of concentration, and they are often called mischievous by their teachers and associates. They will complain frequently of headaches

after and during school hours, or a dull heavy feeling in their eyes, and will be frequently corrected in the schoolroom for not paying attention. Teachers will complain to their parents in regard to these points, and one of the most frequent complaints is that the children will look on their books for a few moments and then their eyes will wander around in a perfectly inattentive manner. The outcome of this is that teachers become impatient and petulant, scholars become disheartened and discouraged, while parents become dissatisfied and remove their children to another school, perhaps only to have a reiteration of the old trouble. What then is the matter? If we examine such children we will frequently find that they are suffering with some unsuspected refractive error, such as I mentioned at the beginning of this paragraph. As an example of this I recall one case most vividly: A young schoolgirl, ten years old, had to be taken from school every year on account of incessant headaches, inability for close application for any length of time, and the consequent falling behind in her classes. She was naturally a very bright child, and her parents could not divine the cause for all this trouble. On telling me this one day when she was in the office with a younger brother (who was being treated for adenoids), I examined her eyes and found three degrees of hypermetropic astigmatism. The correcting lenses were immediately prescribed, with the happy result that the child now suffers with no headaches, is able to do her full amount of study, and as a result is standing among the first in the class.

Many a poor child has been unnecessarily punished as mischievous and inattentive, when, forsooth, they were unable to do their work on account of some existing error of refraction! Do not understand me as saying that such will be found in all cases. Far from it; but what I do mean is that refractive errors play no unimportant rôle. Besides these, must be mentioned poor light for schoolroom illu-

mination, improperly constructed desks, bad ventilation, over-crowded seating capacity; all of which must add "fuel to the flame."

Having pointed out some of the errors which are liable to exist in the eyes of many school children, and which you must recognize from what I have said as potent factors in the well development of the mind and body, let us consider for a moment what steps should be taken to aid in the eradication of this existing evil. I fully agree with Dr. Southard in considering that the best remedy would be a compulsory examination of every child's eyes before entering school and the presentation of a certificate to that effect, just as is done with vaccination certificates. If this was done and the proper corrections made, I believe that many a child would be freed from a life of mental and physical vicissitudes, school days would be happier and brighter, and the lot of a teacher would not be one of strife and vexation. Teachers should themselves receive proper instruction in regard to the hygiene of the eyes, they should be made acquainted with such symptoms as are recognized as a probable cause for the inattention on the part of the pupil, and should report it to the parents in order that a proper examination may be made and all refractive errors excluded. In some of our States lectures are delivered before the Normal Teachers' Association by some ophthalmologist. This is indeed a step in the right direction, which cannot but be productive of good.

Dr. Eaton, of Portland, Ore., suggested at the last meeting of the American Medical Association, in the Section of Ophthalmology, that some steps should be taken by that section "to endeavor to have the various State medical societies formulate certain resolutions, so that the various legislatures, or at least the municipal authorities, might act upon the school-teachers in such a way for the benefit

of the children" (as had been suggested by the various speakers).

In many of our schools the light is imperfect and badly placed, which, often with poor and badly printed text-books, is highly deleterious to the eyes. Then again the desks are sometimes badly constructed, so that frequently to accommodate him or herself to the same the pupil must distort the body, bend his head, cause congestion of the head and eyes, and thereby receive irreparable injury.

Should all existing errors of refraction in the eyes be corrected? That is a question which must be left to the judgment of every ophthalmologist for decision; but certain it is, that in the majority of cases it is best to prescribe correcting lenses. Since statistics have shown that myopia or near-sightedness is on the increase as we ascend from the lower to the higher grades, and as myopia itself has a tendency to increase rather than diminish, should not those measures be adopted which will retard this increase? There is not one of you present to-day who would not answer that in the affirmative. What then are the proper measures to be taken in these cases? It is the proper correction of all unhygienic conditions of the schoolroom which exert an injurious influence upon the eyes; the correction of all errors of refraction by properly prescribed lenses, especially those of myopia. The beneficent effect of properly fitted lenses is well shown by Professor S. D. Risley of Philadelphia, in a paper before the American Ophthalmological Society in May last, entitled "The Results of Treatment and the Optical Correction of Ametropia in Arresting the Increase of Myopia—A Clinical and Statistical Study."

In this article Professor Risley has given us some important data and the main one is this:

That in the analysis of 200,000 eyes which had received glasses for optical correction of ametropia or defective vision, he found that there was a marked retardation in the

progress of the ametropia, and especially was the treatment valuable in arresting the increase of myopia or near-sightedness. These statistics alone are sufficient to show the importance of the proper optical correction of all eyes suffering with defective vision.

To sum up in a more concrete form the main points brought forward in this article, we would say:

1. That the hygiene of school children's eyes should receive as much attention as that of any other portion of the body.

2. That in many cases where there is seeming physical ailment and mental inaptitude, such as headaches, dull feelings, inattention, loss of the power of concentration, the cause can be found in some ocular defect.

3. That as myopia or near-sightedness increases as the pupil advances to higher grades, such treatment should be instituted as will arrest the progress of that pathological condition.

4. That teachers should be instructed by competent ophthalmologists as to the hygiene of the eyes and the various symptoms which indicate some ocular defect.

5. That every child should have his or her eyes examined before entering school, and if necessary a certificate should be given to that effect.

In conclusion, let me reiterate that I am no extremist, but such facts as have been brought before you are of everyday occurrence, and I only trust that they be sufficiently impressed upon you as to be productive of some good.

DISCUSSION ON DR. ROY'S PAPER.

Dr. J. H. Shorter of Macon: Mr. President, I heartily commend the paper to which we have just listened, although I think the doctor in some respects is a little extreme in his views. When we come to think about this subject, it is really a greater work to prevent a child who

has its future before it from becoming practically without eyes by progressive myopia to the extreme point, than it would be to make a successful cataract operation on a man seventy years of age, for although we might restore his sight, he has few years of life left anyhow. I consider this paper an extremely practical one, and the only part of it in which I do not coincide with the author is in being extreme. Paternalism is distasteful even in municipal government. I think it would be rather too extreme to have every child's eyes examined previous to entering school or being assigned to a class. I think it would be well to instill into the minds of the superintendents and teachers of our schools the importance of watching for the appearance of anything in children that indicates a lack of attention. Whenever the parents speak of their children as being inattentive, not watching things closely, my answer is that no child is ever inattentive when properly constituted, and that if it is inattentive, the inattention is due to some defect of hearing or sight. Every child who shows a disposition to be inattentive, or complains of the work of the schoolroom, of headache, ought to be thoroughly examined.

Dr. A. W. Calhoun of Atlanta: I agree with the greater portion of Dr. Roy's paper, and more particularly when he says that myopia has increased and is increasing, but it does not increase to the same extent that it did years back because of the precautions taken. When we look back at the negro race, when the negroes were in their more or less uneducated condition, we rarely ever saw a near-sighted negro. I never knew of one previous to their emancipation. But it is a common thing now to see negroes with near-sightedness. They have better facilities than the white people in a great many cases, afforded by their brethren of the North. They have three or four universities to my knowledge, one of them being the Clark University.

They have every facility for both mechanical and mental teaching, and in these schools you will find that when the negroes are graduated from them they are near-sighted individuals, which is one of the evidences that near-sightedness is on the increase. It is not so marked apparently in the whites as in the blacks. What we need is care and education in looking after these things as early as possible. I am a member of the Board of Education in Atlanta, and I am chairman of the Committee on Sanitation in that board, and these things come before the board constantly. I am also a member of the Building Committee of the Board of Education, and as the result of this committee we are a progressive city and are constantly growing. Every year we have built two new school-houses since my connection with the board, which has been six or eight years. Each school will contain from four to six hundred pupils of different grades. I merely mention this to show what we are doing in the way of providing schools for our children.

There are few school-houses built now where special attention is not given to light, ventilation, etc. Every room is well lighted, and the light does not interfere with the children's eyes. I do not think too much stress can be laid upon the improper construction of schoolrooms, particularly in our small cities. We are rapidly becoming a spectacle-wearing race. Particularly in the older countries do we find that to be the case. Let us take, for instance, Germany, and they are certainly a spectacle-wearing race, and we are rapidly becoming so everywhere; but within the last fifteen years in our country more care has been given to education. We are devoting ourselves to practically compulsory education, and when we get to that we find still more people and children wearing glasses, and the only way to avoid that is proper care and education.

Dr. J. M. Hull of Augusta: There is only one single point in the paper that I feel like emphasizing. I must congratulate the doctor upon the thorough manner in which he has presented this subject, and I indorse with the other speakers the views that have been expressed. I believe, however, that great stress should be laid upon the fact that myopia is not alone a disease, but a perpetually progressive one. I mean by that the degree of myopia has a tendency to become very much more marked. It reaches a higher point, and we have astigmatism engrafted upon it, which has been more noticeable in late years than in the beginning, and for that reason the early recognition of this state is one of the most important factors we can possibly direct our attention to. Therefore, the examination of the eyes of any child, when it first begins an elementary course at school, is to my mind the most important of all factors upon which stress can be laid.

The doctor's recommendation as to a compulsory examination seems to me almost impracticable at the present time, excepting in so far as recommendations can be made. I know of no method that can be absolutely insisted upon. Dr. Calhoun's idea is certainly most correct. I believe other cities, the same as Atlanta, will recognize that constant and close application is one of the factors in producing myopia. There are others which are important, such as hygienic surroundings, light, ventilation, etc. If more attention was paid to these things in the construction of newschool-houses, myopia would undoubtedly decrease. It must be remembered that myopia is largely an inheritance, and that the descendants acquire the disease, and in proportion to the degree of myopia present in the father or mother, so will there be a still greater degree of myopia existing in the children. As a consequence, there is a tendency to progress from bad to worse, and this can be overcome by the building up of the bodily system. I believe that not

only should our public schools have an inspection made of the eyes of the children, the adjustment of glasses at the earliest period of life, but I further believe that one of the most important factors to be considered, if we wish to correct this defect, is physical exercise producing better bodies, giving attention to unhygienic surroundings and close application.

Reference to the Germans as a spectacle race of people is pre-eminently true. If one walks upon the streets of Berlin, particularly for the first time, if he is impressed with any one single fact, it is that the majority of men and women are wearers of spectacles, mostly for myopia. If we go to London and observe the people walking on the streets, there the same thing cannot be said. The English people do not suffer by any means so much from myopia as some of the other nations, and we cannot say that they are in any less degree cultivated or highly educated than the Germans. It is my experience that the English are as cultivated as any class of people in the world, and yet myopia does not exist in anything like the same degree. I believe it is due to the fact of their physical development, as they are by far the finest race of people. Their system of compulsory exercise in their school life is to my mind one of the greatest advantages they have. Again, I think the marvelous degree of influence which the English nation holds in the world's history is due to the fact that their physical education is commensurate with their mental education, and by that means alone is the degree of myopia or defect of vision in English-speaking people less marked than it is with other nations.

I think the doctor's paper deserves our commendation, and some of his suggestions are carried out in Augusta. I speak with a great deal of pleasure for my city, for we have adopted the system he speaks of—having lectures every year by myself and others upon this subject to the normal school.

Physicians address them on various points, and they have been impressed with the importance of keeping under observation children, with a view to ascertaining which of those children are developing ametropia of one kind or the other, and as soon as they detect this condition of affairs, the child is sent to a physician for examination and correction. In this way, I believe the defect is not going to be on the increase.

In addition to indorsing the points of the paper, I do not think the Association, in taking cognizance of them, lays as much stress upon the physical development as upon errors of refraction.

Dr. J. D. Hiers of Savannah: I have listened to Dr. Roy's paper with considerable interest, and I heartily agree with him in what he has said, with the exception of making an examination of all school children's eyes compulsory. I cannot exactly agree with him in that point. I also agree with Dr. Hull with reference to what he has said of myopia being hereditary. My experience has taught me that myopia is not only acquired, but it is hereditary.

The essayist, in covering the ground of the proper care of the eyes of school children, should have said something about trachoma, as we find a good deal of it in school children's eyes, and we know that trachoma or granulated lids are infectious, and in looking for errors of refraction, it seems to me we should look with a critical eye for trachoma.

Dr. Roy (closing the discussion): I have no more to say upon my paper except to thank the gentlemen for their commendations of it, and I trust it may have been forcibly impressed upon the profession at large, and that at no future date we may take some steps in the direction I have indicated, by which more thorough and proper organization of the schoolroom and its work can be carried out.

REPORT OF SURGICAL CASES.

BY W. S. ARMSTRONG, M.D., ATLANTA, GA.

Mr. President and Gentlemen:

When I was requested by the chairman of the Committee on Program to prepare a paper to be read at the present session of the Medical Association of Georgia, it occurred to me that I could not present anything of more interest than several *rare* cases from my case-book, some of which I have been urged to place before the profession in the medical journals. I will, therefore, report first a case of gastrostomy.

Gastrostomy for Impermeable Stricture of the Esophagus.—The subject of this operation, C. W. Branch, was a resident of Charlotte, N. C., aged thirty, an American, and a printer by trade. He was admitted to the Grady Hospital, of Atlanta, October 27, 1892.

Some months previous to his arrival for treatment he had swallowed, through mistake, a draught of aqua ammonia, which resulted in a high degree of inflammation of the mucous membrane of the mouth and esophagus. Notwithstanding the best directed efforts of treatment at his home, the accident was followed by stricture of the esophagus to such an extent that he had, for several weeks, been unable to take solid foods, and swallowed liquids with difficulty.

Upon examination with an esophageal dilator, three strictures were located, the lowest on a line with the cartilage of the fourth rib. Dilatation was practiced every second day for over three weeks, and resulted in increasing the size of the two upper, but made no impression on the lowest stricture.

After the treatment the quantity of liquids swallowed diminished daily, resulting in rapid loss of flesh and strength. Now, an operation for gastrostomy was proposed, which he declined, until a few days later, when no liquids could be swallowed.

He consented to the operation November 24, 1892. The abdomen and chest were rendered aseptic by thorough scrubbing with green soap and bichloride solution 1 to 2,000. An incision was made three and a half inches long, one inch internal to the cartilage of the eighth rib, on left side, and extending through the entire thickness of the abdominal wall. The left extremety of the liver was pressed aside, exposing the stomach, which was empty and very much contracted. A pair of forceps were introduced and the stomach drawn through the lips of the wound and held in position, while the upper and lower extremities of the wound were closed, leaving an opening one and a half inches in length. Sutures of silk were passed through the integument and peritoneum, then beneath the peritoneal and into the muscular layer of the stomach, at intervals of less than a quarter of an inch, and continued entirely

around the elliptical opening. The wound was then dressed antiseptically. On the evening of the operation his temperature rose to 100½°. A nutritious enema was administered later in the day. November 25th, highest temperature 100°, pulse 80; 26th, temperature 99°, pulse 80. Ten ounces of milk introduced into the stomach by aspirator. Twenty-seventh, temperature 100°, pulse 85. The same amount of milk was again introduced by aspirator. Twenty-eighth, temperature 99¼°, pulse 81. On the 29th an incision was made through the wall of the stomach, one inch in length, and a rubber tube was introduced and secured, through which he was nourished by milk punch and soup; temperature 99° and pulse 79. Thirtieth and December 1st, temperature and pulse remained the same. December 2d, temperature normal, pulse 75; greatly improved in strength. Bowels moved naturally for the last three days, and this being the eighth day after operation the stitches were removed. He was now allowed to take solid foods, which he was required to thoroughly masticate before introducing them into the tube. From this time he gained rapidly in flesh and strength. About two months later the rubber tube was replaced by a silver one, which he has continued to use to the present time. On leaving the hospital he returned to his home in Charlotte, where he resumed his former occupation. I learn, through his letters from time to time, that he has enjoyed good health. His last letter, dated April 8, 1895, stated that he was then recovering from a severe attack of pneumonia.

Suprapubic Operation for Vesical Calculus.—The patient, J. J. Taylor, aged twenty-nine, a farmer, residing near Tabor, Franklin county, Ga., was referred to me by Dr. C. F. Davis of said county on December 1, 1894. His general health was poor; he was emaciated; suffered with pains in hypogastric region, and had painful and frequent urination;

his temperature was elevated; pulse quick; and he stated that for three months previous, his thirst had been so intense that he drank from one to two gallons of water daily. His mother stated that when he was an infant at the breast he gave evidence of pain accompanying urination, and from his earliest recollection he said each discharge of urine was accompanied with pain and often sudden stopping of the flow. On September 1st, last, while working on his farm, the pain in the bladder became greatly aggravated and prevented him from working up to the time of operation. Examination of the urine showed specific gravity 1000; color turbid, reaction slightly alkaline. I examined him with Thompson's Searcher, and found that he had stone in the bladder. I then directed that he should be put to bed and kept on light diet for several days.

On December 4th I performed suprapubic operation, at my surgical clinic in the presence of more than two hundred students of the Atlanta Medical College. After thoroughly cleansing the parts the bladder was washed out with a saturated solution of boracic acid; the hips were elevated, a colpeurynter was introduced into the rectum and distended with fifteen ounces of warm water. The bladder was now filled with boracic acid solution, which was retained by tying a rubber tube around the penis. An incision three and one half inches in length was made in the linea alba down to the symphysis pubis. The hemorrhage being checked, a tenaculum was hooked into the anterior wall of the bladder and drawn forward; two strong silk ligatures were passed on either side of the hook through the walls of the bladder, and held by assistant; the bladder was opened to the full length of the external incision. Upon introducing my finger I found a calculus of unusual size attached to the posterior wall of the bladder. After detaching the stone from its position, I made an attempt to withdraw it through the incision, but found this impossible.

I extended the incision upwards through the abdominal wall and bladder as high as possible without opening the peritoneal cavity, and downward through the bladder wall behind the symphysis pubis; and after several efforts removed the largest calculus I had ever seen. Now the bladder was thoroughly irrigated and the margins of the wound in the bladder wall were securely stitched to the line of incision in the integument. Then the upper and lower extremities of the wound were narrowed by deep sutures previously inserted, leaving an opening into which a large rubber tube was inserted. A light antiseptic dressing was applied and the patient removed to his room. In the afternoon his temperature reached 102½°, and pulse 120. At bedtime a dose of morphine was administered and he rested well. Each day his temperature gradually declined, and in one week was down to 98½°, with pulse from 76 to '80, and had a good appetite. The dressings were changed daily and the bladder irrigated. The wound healed rapidly and in thirty days had entirely closed, when the patient was allowed to go home. Early in March I received a letter from him stating that he had gained thirty pounds since he left Atlanta, and that he was engaged in work on his farm.

The calculus was of enormous size, elliptical in shape, flattened on two sides, and weighed at the time of removal thirteen and three-fourths ounces. Its greatest, circumference was twelve inches, and its least nine and one-fourth, being larger by one-third than the one removed by Dr. J. Wm. White of Philadelphia, which has heretofore been regarded to be the largest stone successfully removed from a living person in the United States, without slough and without damaging tissues.

Operation for Gunshot Wound in the Abdomen.—December 13, 1894, during my service at the Grady Hospital, Richard Wallace, colored, aged eighteen, by occupation a hackman,

was admitted at 3 A. M., in an inebriated condition; two hours before he was shot with a pistol, caliber unknown, but thought to be 32. The ball entered from one to two inches to the left and slightly below the umbilicus. From the direction the probe took, the ball seemed to have passed almost directly backward. The patient was conscious, pulse 100, temperature 98½°, and he was in good physical condition. Notwithstanding there was no evidence of shock, I was convinced from the course the ball had taken, that some damage had been done to the intestinal canal,

and determined to make an exploratory incision, with a view to repair any injury that might be found. But before operating, I telephoned Dr. W. S. Elkin, who promptly responded, and after examining the patient, concurred with me in the propriety of making an exploratory incision, and kindly aided me in the operation. Suitable preparation of abdomen having been made, I then made an incision four to five inches long in the linea alba, below the umbilicus, when the viscera was exposed, showing a number of blood-clots, which indicated more or less hemorrhage had taken place in the cavity. Commencing with the jejunum, I

carefully overlooked the intestines which were drawn out and protected by hot towels. Six perforations were found in the jejunum, and one in the mesentery. Each perforation, as soon as found, was closed with iron-dyed silk by the Lembert suture. Then the abdomen was flushed with hot sterilized water, and the wound closed and dressed.

The patient reacted nicely. He was given a tablet, of morphine, one-fourth of a grain; and atropia, one one-hundred and fiftieth of a grain, at night, for one week, to prevent movement of bowels and to produce sleep. Nothing but water was allowed until the 17th, when he was given beef tea and chicken broth. December 21st, the eighth day, the stitches were removed; on the 22d, a half ounce of black matter passed from the rectum; on the 26th an enema was administered, which was repeated every other day until January 3d, when one ounce of oil ricini was given. After this the bowels moved daily. The temperature for the first ten days ranged from ninety-eight and one-half to a hundred degrees, and thereafter was normal. From this time the recovery was uninterrupted. He was able to be up on the 28th of December, and left the hospital January 8, 1895, fully restored to health.

DISCUSSION OF DR. ARMSTRONG'S PAPER.

Dr. F. W. McRae of Atlanta: I think the Association is indebted to Dr. Armstrong for reporting these very interesting cases. There is nothing in the paper which calls for discussion other than congratulation, and I think we all congratulate the doctor upon the remarkable results of his operations.

APPENDICITIS: A BRIEF REVIEW OF MY PERSONAL EXPERIENCE.

BY FLOYD WILCOX McRAE, M.D., ATLANTA.

Appendicitis, though much written about and frequently discussed, is a subject of perennial interest to both surgeon and general practitioner; and there is such a great diversity of opinion as to the proper management of appendicitis, that frequent discussion is necessary for the proper solution of the vexatious questions which present themselves to us in every instance. It is only by constantly comparing notes, both of the strictly medical cases and those which come to operation, and carefully compiling statistics of non-operative as well as operative cases, that we can ever hope to arrive at the truth. I am firmly of the opinion that many cases of appendicitis are strictly medical cases, but I think every case should be considered from the onset as probably surgical. In no disease is it more important for physician and surgeon to work together harmoniously, each lending to the other the value of his experience and best judgment, without dogmatism and without jealousy. In this paper I shall confine my remarks to the diagnosis and treatment of appendicitis.

In every case where there is a sudden attack of abdominal pain, especially if there be nausea and fever, appendicitis should be suspected and carefully sought for. In many cases it can be excluded, but it is always important to bear in mind the possibility of appendicitis and make a diagnosis at the earliest possible moment.

Even in the beginning there are signs which point to appendicitis with more or less certainty. One of the first signs that may be observed is that of limited movement of the abdominal muscles of the right side during respiration. The four cardinal symptoms, as laid down by Murphy, "sudden attack of pain over the appendix; always nausea, frequently vomiting; elevation of temperature; exaggerated local tenderness in various positions occupied by the appendix," should always be borne in mind. Not infrequently the pain and tenderness are referred to points distant from the usual location of the appendix. Occasionally the pain and tenderness become localized on the opposite side of the abdomen or in the epigastric region. In some cases it is referred especially to the bladder, and the only symptoms complained of are pain in the bladder, and either difficulty in emptying the bladder or frequent micturition. In two of the cases which I have operated upon this symptom has been especially well marked. After a tumor has developed it may usually be detected by palpation through the abdominal walls. Examination per rectum is often of value in clearing up the diagnosis, and in the female vaginal examination is of great value. The rapidity with which the tumor develops varies much in different cases, sometimes developing with great rapidity, and in other instances only becoming apparent after a number of days. The rigidity of the abdominal muscles on the right side, and especially of the right rectus abdominalis, is present almost without exception, and is of great value in directing our attention to the probability of this disease. Pain is of not as great value in the diagnosis as localized tenderness in the situations usually occupied by the appendix. Where the tenderness constantly increases, spreading over a larger and larger area, it is evidence that the disease is steadily advancing. When, however, the pain grows less, the tenderness becoming more and more circumscribed, the tem-

perature falls and the pulse shows a marked improvement in quality, it is probable that resolution, more or less complete, will follow. In typical cases of appendicitis the diagnosis should be as readily made as in either pleurisy or pneumonia.

In the atypical cases of appendicitis a positive diagnosis is often difficult, sometimes impossible, prior to opening the abdominal cavity. Except in the fulminant cases the treatment should be medical in the beginning; the bowels should be thoroughly purged, the diet regulated, counter irritation or cold applied over the seat of the pain and tenderness, and the progress of the attack watched carefully. Where the symptoms do not subside after careful purging, and local treatment indicated, the case should be considered from a surgical standpoint, and where the pain and tenderness are increasing, the general symptoms becoming more and more marked, an operation should be done without delay, where favorable conditions and a good surgeon are at hand. I would, however, very much rather risk my chances if I had appendicitis, in the hands of a good physician, than of an unclean surgeon who has more daring than skill or judgment.

When an operation has been determined upon every precaution should be taken to make it thoroughly aseptic. Too great care cannot be given to the cleansing of the hands of the surgeon and his assistant, the field of operation, and the preparation of instruments and dressings. These details should be none the less carefully carried out where there is a general septic peritonitis or a localized abscess. A surgeon is inexcusable who adds to the already infected tissues new infection. Where there is a distinct localized abscess, with well defined walls shutting it off from the general peritoneal cavity, no attempt should be made to remove the appendix, unless it appears in the field of operation or may be removed without breaking up the protective

adhesions. It is a rule that an appendix which has once suppurated freely forming a localized abscess, or terminated in general peritonitis, does not again become diseased. In these conditions the surgeon should attempt to save life and not to do ideal surgery. Should the appendix subsequently give trouble it may be removed when the conditions are more favorable. Here the surgeon should satisfy himself with a careful cleansing of the abscess cavity, thorough packing with gauze; and glass or rubber drainage, where there is a localized abscess; with a careful toilet and thorough cleansing of the peritoneal cavity and free drainage, where there is a general peritonitis.

Since our last meeting I have seen in my own practice and in consultation nine patients suffering with appendicitis, and two of the nine patients having had each two attacks. I have also seen one patient referred to me by his physician, who had treated him through several attacks of recurrent appendicitis, in the interval between the attacks. Of these ten patients I have operated on four, and assisted Dr. Nicolson in one, making five cases that have come to operation. Of the five patients not operated upon, one was a very old woman, a morphine habitué, who died of general peritonitis and exhaustion a short time after I first saw her. The other four patients, two of whom each had two attacks, have been under my observation, and are now apparently in good health. Of the five cases operated upon, three of mine and one operated upon by Dr. Nicolson, recovered. One of the cases operated upon by myself was an old man, who died six weeks after the operation from exhaustion and paresis of the bowels.

I append below brief histories of my operative cases:

CASE 1.—Julia H., aged twenty-two, single. No history of previous attacks. First called to see her Sunday, February 25th. Found her complaining of pain and tenderness in right iliac region, temperature 101°, pulse 80.

Prescribed salts in teaspoonful doses until bowels were freely purged. On Tuesday she came to my office and was feeling much better. I did not see her again until following Sunday, when I found her suffering very much as she was at my first visit one week before, and prescribed the same treatment. Monday she was no better, Tuesday she was much worse, and Wednesday her condition was extremely critical. Temperature 102°; pulse 140 to 150; abdomen immensely distended. Operation March 7th, incision, drainage, recovery. (Previously reported in a paper read before the Medical Association of Georgia.)

CASE 2.—Jacob B., aged twenty-eight, lawyer. History of repeated attacks of colic, and one or more of inflammation of bowels. First saw him in consultation with attending physician May 10th or 11th. Found him suffering with pain and tenderness in right iliac region, irregular temperature, ranging from 99° to 103°. His physician had diagnosed the case typhoid fever, and I was called to help determine whether he could go to his home fourteen miles in the country or not. I was not sure what his trouble was, but rather inclined to the idea that it was appendicitis. He was carried to his home, and I heard no more from him until the night of May 15th, when I was called to operate on him for rupture of the appendix and general peritonitis.

Operation May 16th. Ether. Lateral incision; assisted by Drs. J. L. and A. A. Barge. Found appendix completely bound down by old and recent adhesions, slightly distended with very foul pus, beginning general peritonitis. Removed appendix, washed out abdominal cavity with hot water, inserted rubber and gauze drains, closed wound with silkworm gut sutures, and dressed in usual way. Strychnia and hot water bottles were used freely to bring about reaction. Bowels were kept open with salts. Case progressed very favorably until May 26th, when he was seized with

violent cramps in bowels, requiring the hypodermic injection of morphine to relieve it. From an oversight the bowels had not been moved for four or five days. Vomiting set in, and was so violent that everything taken into the stomach was rejected almost immediately. Impossible to move bowels.

Second operation May 28th. Assisted by Drs. J. L. and A. A. Barge, Kennedy and Hubbard. Chloroform. Patient *in extremis*. Reopened former incision with finger. Found complete paresis of bowels, adhesion of omentum to cecum, and of several coils of small intestines to cecum and to each other. Broke up adhesions, packed wound with gauze and dressed in usual way. Vomiting continued. Gave strychnia, salts and elaterin hypodermically, and succeeded in getting slight movement of bowels on May 31st, followed by free evacuations. His improvement had been steady, and he was convalescent on June 13th, when I last heard from him. Recovery complete and uninterrupted.

CASE 3.—Walter W., aged sixteen, scrofulous diatheses. History of repeated attacks of stomach-ache, sometimes accompanied with fever. First called Sunday, June 17th. Found him with temperature of 101°, pulse 84, nauseated and vomiting occasionally, pain in epigastrium. Prescribed saccharated calomel, to be followed by saline. Called again next morning, found temperature 103°, pulse 96, pain and tenderness over the site of the appendix very marked, muscles very tense, slight induration and dullness. Diagnosed appendicitis. Told family I thought an operation would be essential if he was not improved by next morning. Called Dr. Nicolson in consultation, and he agreed with diagnosis, and we put patient on teaspoonful doses of salts in hot water, to be repeated hourly until bowels were freely purged. Next morning, Tuesday, June 19th, temperature 103°, pulse 108. Operated at noon, assisted by

Drs. Nicolson, Kennedy and Hubbard. Lateral incision. Found appendix very much enlarged, gangrenous, and contained in an exceedingly thin-walled abscess, holding about four ounces of very dark, thin, fetid pus, which must have ruptured into general peritoneal cavity in a few hours. Removed appendix, inserted gauze and rubber drains, closed and dressed in usual way.

Tedious recovery. He developed a fecal fistula on fourth day, which discharged freely for about three weeks, but closed spontaneously. Developed an abscess low down in pelvis fourth week, which was evacuated through original incision by tearing up adhesions with the finger. Ligature with which the appendix was tied off came away on thirty-sixth day. Recovery.

A ventral hernia developed several months after the operation. The boy was so averse to any kind of constraint that he would not wear either adhesive strips or any abdominal supporter. The hernia is small, and has never given him any inconvenience, but will probably grow worse unless carefully supported.

CASE 4.—Thomas J., aged about forty. Seen in consultation September 25th with Dr. L. P. Stevens. History of sudden attack of colic, followed by jaundice three weeks previous to my first visit. The attack came on soon after the patient had eaten heartily of watermelon. The patient vomited freely. Suffered with violent colicky pains for several hours, but did not consult his physician until about a week afterwards, and then simply asked him for a prescription for biliousness. Dr. Stevens when first consulted suspected appendicitis, and sent his patient home and made an examination that night, but could find no well-defined tumor. Temperature ranged from 99° to 101°, and rarely above 99½°. Pulse about 70 to 80. Pain in the bladder was complained of continually. When I first saw him

there was a well-defined tumor in the right iliac fossa. Marked tenderness, temperature 99½°, pulse 72. Operation was advised, and upon the following day I operated—September 26th—at patient's home, assisted by Drs. L. P. Stevens, J. P. Kennedy, T. V. Hubbard, and Medical Students C. E. Boynton and R. T. Dorsey, Jr. Lateral incision. Well-defined abscess (just on the point of rupture into general cavity) completely walled off by dense adhesions, except point of imminent rupture, which immediately came into view. The slightest manipulation ruptured the abscess wall, but fortunately the general peritoneal cavity was protected by careful sponging. This abscess contained about four ounces of pus. The tumor, including the appendix, was removed entire. Subsequent history uneventful; recovery prompt and complete; two or three of the ligatures used in tying off the omentum, and the one with which the appendix was tied off, subsequently came away through a small fistulous opening in the upper angle of the wound.

CASE 5.—Newt. McL., aged about fifty-five, resident Andrews, N. C. Seen in consultation with Dr. Donald Wilson, February 22d. History of one attack of bilious colic, with fever and vomiting, about a year ago. Symptoms at first very indefinite. Pain in the bladder was so marked and other symptoms were so obscure that it was about two weeks before a positive diagnosis was made, and nearly three weeks before the operation was done. When I first saw him there was a large tumor occupying the right iliac fossa, and extending as far as the median line. Fluctuation easily detected. Temperature 101°, pulse 112. General condition fairly good, though patient was extremely despondent. Operation immediately determined upon and preparation rapidly made.

Operation February 22d. Chloroform. Assisted by Drs. Wilson and Webb of Andrews, N. C., and Dr. Greenwood

of Mineral Bluff, Ga. Incision made into the large localized abscess, containing more than a pint of very foul pus. The abscess cavity was thoroughly cleansed with sponging and washed with sterilized water and peroxide of hydrogen. Packed with gauze and a large rubber drainage-tube inserted. The temperature rapidly fell to 97½°, and the pulse to about 84 to 90. General condition of the patient following operation was excellent. I left that night and did not see the patient again. He improved nicely for the first three or four weeks. The only difficulty being to get him to take sufficient nourishment and to keep his bowels open. April 5th the patient died, probably from paresis of the bowels, due to the dense and extensive adhesions which had formed during the slow development of the attack during the three weeks preceding the operation.

DISCUSSION ON DR. McRAE'S PAPER.

Dr. Wm. Perrin Nicolson of Atlanta: Mr. President, I have very little to say except to emphasize some of the points Dr. McRae has brought out, especially in the atypical cases of appendicitis. One case which he mentions I operated on since the last meeting of this Association. It was a boy, twelve years of age, who had all the symptoms of the disease. The abdomen was tense, there was intense pain, the limbs were drawn up, and a distinct tumor could be felt over the right iliac region. I operated on him at the Grady Hospital. He had a temperature of 103. Dr. McRae and a number of other gentlemen were present. We found a large deposit surrounding the cecum and lower part of the ileum, which appeared to be malignant, or I thought it was malignant. After a long and tedious dissection we disentangled the bowel from the immense inflammatory deposit and removed it. There was not a drop of pus present anywhere, nor could I get a history of any serious attack of appendicitis before that time. Yet the appendix must have

undergone more or less violent inflammation which had resulted in this great deposit. In another case which was seen with me by Dr. Holmes, there was apparently a malignant development in the appendix, or in the deposit surrounding it and the appendix. The patient, a woman, had a stricture of the sigmoid flexure from cancer. I saw her in a recent attack of appendicitis. There was a tumor over the region of the appendix which subsided gradually. I then did not see her for several weeks, when finally she developed another large tumor and Dr. Holmes saw her with me, and we both agreed from the general symptoms she had there was some pus. On account of her greatly debilitated condition we simply used cocaine, and in passing through the peritoneum into the abdomen we came down upon an enormous mass of broken-down cancerous tissue, which was undoubtedly a metastatic cancerous development in this inflammatory deposit.

Another case I saw with Dr. Elkin in consultation since the last meeting, which forcibly illustrates what was discussed at that meeting of this Association, namely the relation which temperature bears to the extent of the appendicitis. It was a young man who had been very sick. He had a high temperature, a great deal of pain, the trouble pointing to acute appendicitis. All these symptoms subsided, and he had a pulse of 80, a temperature of 98½°, felt well, and thought he was getting well. There was a distinct tumor, but no fluctuation could be made out. An operation was consented to, and when the patient's abdomen was opened there was a fountain of pus six or eight inches high, which was as foul smelling as you could imagine, yet the patient had a normal pulse and temperature and felt he was getting well daily, which goes to show what the doctor says in his paper, that the temperature does not count for anything, whether it is high or low. In one case where I had a temperature of 103° there was no pus what-

ever that we could find, and the patient had apparently an old inflammatory deposit and some inflammation about cecum, and in the other case with this dreadful condition there was no rise of temperature.

Dr. T. M. McIntosh of Thomasville: In speaking of rather unusual cases of appendicitis, I operated on one some years ago before appendicitis was as fashionable as it is now, or rather before the diagnosis of the disease was as clearly made as it is at the present time. The unusual feature in that case was that the tumor was directly in the median line. The case was referred to me by a physician from a neighboring town. The attack came on with the usual suddenness of a case of appendicitis. The patient had pain and fever. The physician had given him morphine to allay the pain, and I saw him a week after the onset of the symptoms and found a large tumor immediately in the median line, just as if the bladder was very much distended. I advised an operation which was consented to, and evacuated fully a quart of pus. There was a limiting membrane which I washed out. I did not search for any foreign body with my finger, nor did I remove the appendix. I dressed it, applied a rubber drainage-tube, and the man got well and has remained so ever since.

Another case which illustrates the necessity of operation, in order to save life, was a negro boy that I saw after seven days of illness. He had been seen by another physician, but I do not know what the diagnosis was or the reason why an operation was not suggested. At the time I saw him he was almost *in extremis*. I operated, not expecting much to save his life, and he died the day following the operation, though I am confident that if I had performed an operation earlier the chances of saving life would have been greatly increased, and I think he could have been saved.

Another case which I will mention is interesting, in that

we cannot always tell when we should operate—what cases will get well or die, if treated medically only. A patient was brought to me by a physician. The man had had constant pain and fever for ten days. When I saw him in the afternoon there was a distinct tumor, very perceptible to the eye and to the touch, with some tenderness. I advised an operation in this case, but it was refused. The man got well and remains so to-day. Strangely enough the week I saw the little negro that died from too long delay, I had two other cases of negro children younger than he, with sudden attacks of pain, fever, and a perceptible tumor. I did not operate on these cases, gave morphine and poulticed abdomen, and in two or three days they were well. In the case of the first negro who died after the operation, if it had been earlier the chances of cure would have been favorable. In the other case where I thought the indications for operation were strongly indicated, the patient refusing, contrary to my solicitation and Dr. Watkins's, got well; consequently I do not think we can lay down any cut and dried rule for operating in cases of appendicitis.

I have mentioned these cases to show the uncertainty of positive knowledge as to what cases we can treat medically with safety, or will die if not operated on. It must depend largely upon the particular case and the good judgment of the surgeon.

Dr. J. McFadden Gaston, Jr., of Atlanta: I notice that Dr. McRae, in his paper, paid a great deal of attention to morphine, and I would like to hear the opinion of those in discussion of the paper on that point, because I think it is an open question. So far as I have seen, morphine is certainly very beneficial in allaying pain and has a soothing effect. I have seen cases in which, after the operation, the patients would cry for morphine for days, and some one would have to stay with them. One patient called for

it and said he absolutely needed it, and was kept under its influence for over twenty-four hours after the operation. Afterwards he was given salts, both through the mouth and hypodermically. A free discharge was required, just on the principle of treating peritonitis. If he had not been given morphine at that time I do not believe he would have recovered from the operation. Soon after that I had a case in my practice that caused me to doubt the use of morphine. I put it off, although the man was very nervous and in great pain, and I did not know whether to give it or not. I had the same impression that Dr. McRae had, but as a last resort I gave it to him, as I saw he was not going to be relieved. He was very much relieved, and I believe it was the means of saving him. The diagnosis of appendicitis was confirmed by Dr. Elkin and my father. The first part of the case I had to deal with, and not having had any experience in operating for appendicitis, I was not willing to endanger his life, though I would not hesitate to do the operation if I thought it was necessary. However, I delayed operation and gave the patient calomel and jalap and used belladonna ointment with camphor applied in the right iliac region. I found by constant applications of belladonna ointment relaxation occurred, and probably the same effect might have taken place when the morphine was given. However, the muscles did not remain so rigid as they were at the first and the tumor was not so perceptible and marked. There was never any very great dullness. I found that by using oiled silk I could keep the ointment off the clothes so that it would really absorb the belladonna ointment. I am convinced that this case was benefited both by the mercurial and by the subsequent medication, but I attribute the main relief to a single pellet of morphine more than to anything else. In this case, as in that of Dr. McIntosh, the patient recovered completely without an operation.

Dr. M. L. Boyd of Savannah: I desire to dwell upon one point in the discussion, and that is, the cases that have been reported as being operated upon have been cases *in extremis*. It seems to me, the most practical question for us to discuss with reference to this matter, is what is best to do in *all* cases of appendicitis. The operation for appendicitis is not a difficult one in cases which have gone on to the formation of an abscess. The adhesions around have protected the peritoneum, and we simply have to deal with an abscess, to let out the pus and keep it drained until the patient gets well. I do not hesitate to advise operation on every case of appendicitis as soon as the diagnosis is made. In my individual experience I have had several cases get well in which I have advised operation, and other cases in which I did not advise operation. Some of the patients did not get well, others did. I am strongly of the opinion that it is the best policy for the surgeon to advise operation in every case; then he places himself on the safe side. If an operation is refused he cannot help it. A large number of cases, if operated on as soon as a diagnosis is made, would get well, while, if the present course is pursued, fatal results will follow in many cases that ought to get well.

A case was brought to my office from South Carolina day before yesterday, in which it was impossible to make a diagnosis. There was no localized pain, but a general peritonitis had ensued. There was tympanites and tenderness all over the bowels, the tenderness being more marked on the right side above the umbilicus than anywhere else. Owing to the impossibility of localizing the trouble, I made a median incision and searched for and found the appendix buried in a mass of adhesions under the cecum, which I tore loose, and removed an obstruction of the bowels which had existed for several days. The child was known not to have had an action of the bowels for three days. It had complained of considerable pain in its bow-

els for several days, but it was not known when they moved last. The patient was *in extremis*, with a pulse of 140, temperature not high, as is often the case in appendicitis. The operation unfortunately in this case was done too late. The bowels moved after the adhesions were broken up. The patient died twelve hours after the operation. The point I wish to make is this, that I believe it would be best to operate on all cases of appendicitis as soon as the diagnosis is made.

Dr. Virgil O. Hardon of Atlanta: I desire to say just a word in connection with Dr. McRae's paper. I was very glad to hear him say what he did with reference to the use of opium, because I have decided views on that subject, and his views as expressed agree with mine. One of the gravest dangers we have to contend with after an abdominal operation is paresis of the bowels. I do not mean by that that it is a more frequent untoward condition than any other we meet, but it is the one I dread most of all. We may have to deal with acute peritonitis or with abundant hemorrhage, and we know how to meet these conditions. But with paresis of the bowels it is almost impossible to make any impression by any method of treatment, and the patient dies. After the condition has passed beyond a certain degree of severity, I consider death inevitable. There is no doubt in my mind that the use of opium increases the amount of paresis when that condition has once commenced. All patients suffer with considerable pain after abdominal operations, which cannot be controlled except by morphine. I would infinitely rather have my patient suffer any amount of pain than to give opium and run the risk of having her die from paresis. When I commenced to do abdominal work I used opium in many cases. In my early cases, those that died were, without exception, the ones to whom I had given opium. I have lost a pa-

tient during the past year, after an abdominal operation, on account of being compelled to give her opium. She was an opium habitué. The amount of depression from the withdrawal of opium was so great that I was obliged to give it to her. She died from paresis of the bowels. I believe it is the duty of the surgeon to withhold opium in these cases. It is true the suffering is sometimes great, but at other times it is not severe. The suffering is not sufficient to interfere with the success of the operation, and is not as a rule long continued. If I were unfortunate enough to have a laparotomy performed upon myself, I certainly would not allow my surgeon to give me a dose of opium, no matter how much pain I might suffer.

Dr. J. B. S. Holmes of Atlanta: I indorse every word Dr. Hardon has said. The trouble that I have had in my laparotomy work has been attributable to opium after operation, as you will see from the paper I shall read to-morrow. I wish also to indorse Dr. Boyd's views in regard to the necessity for early operation in appendicitis. It is essentially a surgical disease, and if the patient escapes the first attack without perforation or suppuration, he is constantly in danger of recurrence, and it is therefore always best to operate. I agree with Dr. McRae that we should not search for the appendix in the complicated cases where there are a great many adhesions. We should simply open the abscess, drain it, and let the appendix take care of itself.

Dr. W. H. Doughty, Jr., of Augusta: I have nothing particular to say with reference to this subject, except to add a little to what Dr. McRae has said about certain points connected with appendicitis and the early operation for it. My own experience has taught me that it is a desirable thing to be very chary about breaking up adhesions about the appendix. I think that where an abscess has

already formed, it is a good thing to evacuate it and let the adhesions alone as far as it is possible to do so; in other words, not to run the risk of making an opening from the abscess cavity into the general cavity of the peritoneum by breaking up adhesions in the effort to complete the operation by removing the appendix. Upon the matter of appendicitis being a surgical disease, I have some views that are at variance with those that have been expressed. My own experience with appendicitis amounts to about eight operative cases, but I do not know how many I have seen in all, and I have been fortunate up to this time in not having a death among the cases that have come under my care. All of the cases in which no operation was done were treated by the administration of salines and general measures, and they got well. I have seen a good many of this class, and yet I cannot but feel that in those cases that got well that an operation would have been a desirable thing; but if I were in the place of any one of those patients I would prefer to take the chances of recurrence of appendicitis rather than to submit to operative interference. Of course it is a matter of choice, but this is the choice I would make myself. One reason is, that it is by no means a small thing to cut a hole in a man's abdominal wall, for you run the risk of having hernia and of introducing some sort of infection, and possibly may bring about obstruction. As regards the time when an operation for appendicitis should be done, I do not believe it ought to be made as soon as a diagnosis is arrived at. I believe that, while it is impossible to fix any time, it ought to be done simply when it is evident that the disease is not going to yield to other measures. The rule I have followed myself in these cases is this, that if I see a case of appendicitis to-day, and it is not better to-morrow, I operate on it. If, on the other hand, the tumor shows no signs of developing in any way, if it is not any worse, then I do not operate. That is a

rule I have followed for my own guide, and up to this time I have not seen the folly of that rule. I recognize the fact that in following any rule to postpone an operation, you always run the risk of having rupture of the appendix and the development of general peritonitis. While that is the case sometimes, and while we may at times lose patients, on the other hand we avoid having some die if they had been operated upon. It has not been my practice to pursue the cleansing of the abscess cavity very assiduously, but I generally content myself with putting a drainage-tube in it and providing an exit for the pus, then letting it alone. I have not done that, however, as a rule, but in cases where it seemed best to do it, I have either washed or sponged the cavity out.

In regard to the matter of opium in the after-treatment of abdominal operations, my experience leads me to this view, that while in the majority of cases opium is not a desirable thing to give after laparotomy cases, there are certain cases that recover occasionally in which it is absolutely necessary to give it, and I am obliged to say that up to this time, while I have used opium in a small proportion of the cases I have operated upon, I never yet have had paresis after administering it. On the contrary, in two cases that I can recall, I feel absolutely certain that it was not only the proper thing to do, but it furnished the turning point in the history of those cases that otherwise looked unpromising.

No one has commented upon the use of opium in the beginning of appendicitis. I think that is an error commonly made. I do not know that I have seen a case of appendicitis in the hands of another physician that had not been given opium. It is one of the first remedies used, and as a consequence the symptoms are masked. After having given opium one day, the practitioner thinks his patient better, and so on from day to day until the later

and graver symptoms demonstrate the error of his course, unless the case happens to be one that gets well. I do not believe in this masterly inactivity. I do not think it justifiable. In the face of the statement of Mr. Treves, that 90 per cent. of all cases of appendicitis get well without operations, I repeat my belief in the wisdom of advising operation in all cases. If 90 per cent. get well without operation, I believe that 98 per cent. would get well if all cases were operated on early, thus saving six per cent. of fatal cases that are left to chance. When I say that I advise early operation in all cases of appendicitis, I do so with the profoundest feelings of the responsibility thereby entailed, and I mean for the advice to carry with it the qualification that it is intended only for those surgeons who entertain an inflexible faith in all of the strictest details of asepsis, to the extent even that if, by the slightest neglect in exercising asepsis in its minutest details, septic matter is carried into the abdominal cavity, he would feel that violence had been done to his conscience and the loss or jeopardy of a human life made chargeable to his neglect. In the hands of an intelligent, skillful surgeon, imbued deeply with faith in modern surgical methods, I do not believe that more than two per cent. of all the cases of appendicitis would die if all the cases were subjected to early operative measures. Besides, some of the 90 per cent. of cases that we are told get well without operation are not in reality well. They did not die, but *they are not well.* This is evidenced by the recurrent cases, and by the inflammatory adhesions found in the neighborhood of the appendix on the *post mortem* table in patients who have died of other diseases, and to which Dr. McRae, of Atlanta, calls attention, and which he uses as an argument for surgical noninterference except in extreme cases; but which, to my mind, argues forcibly in favor of operation, since the appendix is thereby shown to be a source of danger to more

people than we would otherwise suppose. I do not think this operation should be one of last resort, and done only on patients who would without doubt die if it is not done, but that it should be at least considered from the standpoint of expediency in every case of clearly diagnosed appendicitis. I believe that the day is not far distant when this view will be universally entertained, at least by the surgical branch of our profession.

I do not approve of the use of opium as a routine measure after abdominal operations, except in cases of operation on the intestines; but there are extreme cases, such as profound shock or great pain, when it is indispensable and should be used without hesitation.

Dr. Hardon has referred to the matter of intestinal paresis. I would like to ask if any one has had any experience in opening the intestine in cases of that kind? The reason I ask it is this: I had an experience once which was a very interesting one to me. I was called to see a woman who was said to be dying of general peritonitis. She certainly presented all of the signs of acute general peritonitis. She was put upon the operating table, in an extreme condition, with this object in view, that inasmuch as she was going to die—at least, all of the doctors were agreed on this point—by cutting down upon the intestine and relieving the obstruction it could do no more than kill her anyway. There was nothing in the history of the case to guide us as to what could have been the origin of the trouble, except that she had had two or three attacks of pain in the right side. I made an incision in the right iliac region, over the appendix, thinking I might strike something there. After opening the abdominal cavity I pulled up a loop of intestine, passed my fingers into the abdominal cavity and found everything adherent. It was difficult to break up the adhesions. I caught hold of a loop of intestine,

brought it up into the opening and cut a hole in it, applied a hemostatic forceps to the hole in the abdominal wall, and then put a dressing over it. There was an enormous discharge of gas and liquid from the intestine. The woman was put back to bed, after the usual measures of uniting the bowel had been taken, and she got well without a single unpleasant symptom, the vomiting having ceased. This woman lived a year or more after the operation and remained apparently in perfect health. I am not sure, but I think she bore children afterwards, and, then, I was informed that she died from a sudden attack of sickness. She moved away from Augusta into the country somewhere about fifteen months after the operation. It occurs to me that this case was an unusual one in many respects, and it leads us to consider the suggestion that in cases of pronounced intestinal paresis where the patient is dying, whether it would be worth while to cut down and open the intestine to see if any good would result from it.

Dr. T. M. McIntosh of Thomasville: In regard to the use of morphine in cases of obstruction of the bowel and after laparotomies, bearing upon this particular point, I will mention a case or two where where there was an obstruction of the bowel. One of them was a white boy, who had a distinct tumor in the region of the umbilicus. He had vomited, and there was great prostration. He lived quite a distance from me. I went to see that boy twice, prepared to open his abdomen, but the physician in attendance objected the first time I urged operative interference. I went again in a day or two afterwards, having fully made up my mind to do it. The boy seemed better, and had been taking morphine all the time to relieve pain, and large enemas of water. After six days the bowels moved freely and he got well.

Another case was a negro woman, in which there was obstruction of the bowels, with great distention, for an entire week, and in which I pursued the same treatment of giving the patient morphine. I also used warm water with soapsuds as an enema, and that woman got well.

I thought it was proper in those cases for me to give morphine. I think if I were subject to appendicitis or other abdominal diseases, I should want to be relieved of pain. I do not know just what the cause of death is, in all cases after laparotomy, for distinctively female diseases, as my experience in this class of cases is not as extensive as those gentlemen who have said they never give morphine; but I have made a number of herniotomies and a few laparotomies for female diseases, and in all of them, where needed, I gave morphine for pain.

Dr. K. P. Moore of Macon: While I agree with Dr. McRae and Dr. Hardon in what they have said, it is a good rule in all abdominal work not to give morphine and opiates after operations. But it seems to me, there is a happy medium between the two extremes, and after my abdominal work, which has not been very extensive (something over thirty abdominal sections), when I have a patient who is tossing, rolling, and becoming exhausted with pain and nervousness, I am quite sure that I have obtained good results by administering a small amount of morphine. It is not necessary to produce intestinal paresis in order to relieve the nervous prostration and pain incidental to these operations. I have been wonderfully impressed with the results in which I have given patients half a grain of phosphate of codeine, given hypodermically. I recall one patient who suffered so much for ten or twelve hours after operation that she seemed to be threatened with nervous exhaustion from pain and restlessness. I gave her half a grain of phosphate of codeine hypodermically, with most

happy results. She said to me: "Why, doctor, do you allow me to go on and suffer pain, hour after hour, when so small a dose will relieve me and make me comfortable?" So I think that we cannot lay down any arbitrary rule and absolutely stay by it; we should be governed by common sense and good judgment in each individual case. It occurs to me that it is probable that we make errors sometimes by going to one extreme as well as the other.

I would like, in this connection, to report a case of appendicitis which came under my care. I regret that I did have the pleasure of hearing all of Dr. McRae's paper. Dr. Boyd raised the point as to the propriety of operating on *all* cases of appendicitis as soon as the diagnosis is made. There come to us, occasionally, cases of recurrent appendicitis, where suppuration has not taken place and the patient seemingly recovers, either from an attack of catarrhal appendicitis or from the presence of a foreign substance in the appendix. I believe the recurrent cases of the disease should be operated on, although there have been no *really* threatening symptoms.

A patient came to my office eighteen months ago, between the attacks. I obtained a history to the effect that he had been having recurrent attacks of this disease for more than a year, the attacks coming on more frequently and with more severity each time. He was operated upon, and the whole of the appendix was found adherent to the cecum and to the abdominal wall. These adhesions had to be broken up and the appendix dissected up. At the dependent point of the appendix, which lay just under the cecum, a small abscess was found, which showed the wisdom of operation in this particular case. If this patient had not been operated upon the abscess would have continued and would, sooner or later, have terminated in serious consequences, and possibly the death of the patient. The abscess cavity, which was not large, was thoroughly curetted,

sponged out, and the wound closed. Most of the authorities teach us to either use drainage-tube or pack with iodoform gauze abscess cavities in the abdominal cavity, but as this was a very small abscess, after thoroughly curetting, sponging it out, and irrigating the abdominal cavity, I felt safe in closing up the wound. The appendix was tied off close to the gut, cut away, and the stump thoroughly cleansed. The operation was done at Eastman, in this State, and in four or five weeks the patient visited me at Macon, rode with me around the city, and expressed himself as feeling better and stronger than he had for several years. I have seen him several times since, at intervals of several months, and he now enjoys fine health, and has never had a symptom of his old trouble.

Dr. McRae (closing the discussion): I am very much obliged to those who have taken part in this discussion, and I wish to call attention to a few points that have been brought out. I wish to speak especially in reference to the statement made by Dr. Boyd, that all cases of appendicitis should be operated on. I wish to positively disagree with that statement, and there are several reasons for it. One of the principal reasons is that a number of our best surgeons, Treves and others, say that ninety per cent. of the cases of appendicitis that are not operated on get well. Another reason is a purely pathological one, and it came under my observation when I was a demonstrator of anatomy and had the opportunity of observing this condition closely in the dissecting-room. Most of the subjects we had were negroes from the convict camp, who died from various causes, were brought into the dissecting-room, and presented evidences around the appendix of previous inflammation, from which they had recovered, and subsequently died of other diseases.

I have seen cases of appendicitis where I have advised

operation, and it has been declined. These patients have recovered, and remain well from that time until this. It is not a question of how to better our statistics, but how many lives we can save. I am confident that a number of these cases can be treated medicinally. The rule that I have laid down for myself is, that if they do not improve after a day or two's treatment, or if there is a progression rather than a retrogression of symptoms, then I advise operation. In case there is improvement, then I should not want to operate.

Again, I should not want to give opium in the beginning of appendicitis. If I find a case is progressing nicely in which operation was declined, after thorough purging of the bowels, I should give opium, but never, if there is any idea of operation, should opium be given prior to it. The cases with which I have had trouble after operation have been those in which I have used opium, and I feel that I would not want to take a dose of opium myself if I had to be operated upon for appendicitis. The moral influence of the physician is worth a great deal, and in a great many instances we can quiet patients better by it than by giving a dose of opium.

The point which Dr. Doughty has raised I heard discussed by Richard Douglas of Nashville, in a paper before the Southern Surgical and Gynecological Association, at Charleston, last November. The doctor read a paper on the treatment of suppurative peritonitis, reporting some cases in which there was great distention of the intestine, and the cases that got well were those in which he incised the intestines freely, let out the gas, then closed the rents in the bowels. Those under similar conditions, where this was not done, all died. The weight of opinion is in favor of operative procedure in those cases along the line suggested by Dr. Doughty.

THE USES OF THE GALVANIC CURRENT IN OFFICE PRACTICE.

BY J. C. LEHARDY, M.D., SAVANNAH.

It was my intention to prepare for the members of this Association a sketch showing the progress that has been made in the application of electricity in medicine, surgery, gynecology, and in the manufacture of electro-medical appliances during the last decade, but I have been deprived of this pleasure by other work, and had only the time to hunt up the records of a few cases treated exclusively by electricity.

CASE 1.—A handsome and healthy brunette of twenty-four from North Carolina, six years married without children. There was upon her face a very thick, silky, raven-black beard, moustache, and imperial, such as would have been highly prized by any man, but intolerable to a woman, and she decided to have it removed at any sacrifice. I started with the orthodox iridio-platinum needle, passing a weak galvanic current after each insertion; but the pain was so acute and the process so slow that I resorted to depilation by introducing caustic potash with a needle. I soon discovered, however, that one application was not sufficient to destroy the bulb; two, or even three, were at times needed. The severity of the pain and the formation of deep ulcers demonstrated this method to be worthlesss. I next procured fine cambric needles (No. 12); these I inserted along the shaft and well into the bulb of each hair on one side of the face. Twenty-five to fifty needles were intro-

duced at each sitting, taking care to separate the needles to prevent inflammation.

The insertion of these needles, if carefully done, gives no pain whatever. A fine soft Turkish sponge moistened with salt water was then placed in contact with the needles and the surrounding skin. Upon this I held the negative electrode, while the positive was held by the patient. I then turned on a weak current from the battery, and increased it gradually until it was sensibly felt.

At the expiration of from five to eight minutes the current was closed, the sponge removed, and the needles withdrawn. A small white spot was visible where the needles were inserted, the bulb was destroyed, and hairs could be removed by gentle pulling. This process was repeated every few days until the last bulb was destroyed and the last hair removed. No unsightly marks were left except the few cicatrices produced by caustic potash, and the lady was fully rewarded for her fortitude, patience, and determination. This experiment proved to be eminently successful. The insertion of the needles was comparatively easy and expeditious; the galvanic current being spread over a large surface and at many points was borne readily, giving a minimum of pain, while the results were very gratifying. Having repeated this treatment in a number of cases since and obtained good results, I can recommend it to the profession.

Case 2.—A spinster of forty-three, department clerk at Washington, D. C., visiting her sister in this city, was taken with a violent uterine hemorrhage in transit; she was brought to my office and placed upon the operating chair in a fainting condition. As soon as possible a folded sheet wrung out of hot salt water was spread over the abdomen and a speculum inserted; the negative electrode was placed upon the sheet immediately over the uterus, while the other, an olive-pointed electrode, was introduced in the

uterine cavity and held there while the current derived from a battery of 150 zinc and carbon cells was applied. At the expiration of three minutes the bleeding had ceased, the current was closed, and the electrodes removed. She was soon strong enough to be driven home. No hemorrhage has since recurred.

As soon as she was able to travel I sent her to North Carolina. After remaining there two weeks she returned to the city. A bimanual examination revealed the existence of three distinct tumors, hard and nodular to the touch; one the size of an orange was felt through Douglas's cul-de-sac, the others through the abdominal walls; the upper one (as large as a walnut) was imbedded in the tissues of the fundus, while the other (the size of a hen's egg) was felt immediately above the pubic bone. The womb was high up in the pelvis and its length 4¼ inches. Having but six weeks in which to give my patient the benefit of Apostoli's treatment—and as I had lost much time in two preceding cases from suppurative inflammation, induced by the insertion of sharp-pointed electrodes into the tissues of tumors—I resolved to apply the current without abrading any of the tissues. The wet sheet was applied over the abdomen and the positive electrode placed in contact therewith; the negative electrode, globular in shape, and covered over with a fenestrated rubber cap, was placed in Douglas's cul-de-sac, the bright surface in contact with the protruding tumor; the current of 150 cells was then turned on and continued as long as the patient could bear the pain; it was then switched off, to be turned on again after a short interval, so as to insure a contact of five minutes, at least, at each sitting. In the treatment of the other tumors a smaller olive-shaped electrode was inserted into the uterine cavity, each tumor being treated consecutively on alternate days.

The patient improving daily in health and strength the

treatment was not interrupted. There was no bleeding nor any appearance of the menses at the expected period. Forty days after the first application of the negative pole to the tumors, a marked diminution in their size was apparent to both the patient and myself. She then returned to her duties. One year later I was informed by her physician that the three tumors had totally disappeared. That patient has since written me that the "change of life" had come and that her health was better than ever before.

Case 3.—A mulatto, twenty-eight years old, married five years, no children, was brought to my office on account of a continuous "bloody flow" from the genitals. A large tumor filled the vagina and protruded between the labia. With the right index finger in the rectum, the left hand pressing down above the pubis, I found that it was a polypus pendant from the uterine neck. With difficulty I placed a platinum wire around the tumor close to the uterine neck and secured it in the *écraseur*, the full current of a cautery battery was turned on, and the red-hot wire being tightened soon cut through the growth. There was no bleeding; the tumor was then removed with forceps, the stump thoroughly cauterized, a second application of the cautery made later, and every vestige of the pedicle soon disappeared. The woman conceived two or three months afterwards.

Case 4.—A Spanish lady, fifty-three years of age, the worse case of asthma that I have ever met with, was placed upon the chair. In her efforts to breathe there was no perceptible motion of the chest walls, her face and neck were livid, the eyes protruding, the veins distended with black blood. A large sponge moistened with salt water was placed upon the back and sides of the neck and the positive electrode upon it; the current of fifty cells was turned on, and the other electrode was passed rapidly across the ribs of one side and then of the other, causing contraction fol-

lowed by a relaxation of the intercostal muscles; the effect upon the breathing was almost instantaneous. In a remarkably short time the color changed and the breathing became more natural. At the expiration of five minutes the patient fell asleep upon the chair and was placed upon a sofa. After a long nap she took the cars and went home. The current of twenty-five cells was applied daily for a week and twice every week for a month, and irregularly afterwards. Eight weeks after the first application she had a mild attack of asthma brought on by imprudence in diet. Since May, 1892, she has had no return of the disease.

These cases will suffice to show some of the ways by which electricity may be utilized. The galvanic current has enabled me to stop the excruciating pains of angina pectoris and of cramps almost instantly; to give immediate relief to persons suffering from acute and chronic neuralgia, torticollis, myalgia, muscular pains from overwork, the over-distention of the stomach and bowels by gas, from asthma attended with muscular contraction, etc. With it I have stopped hysterical convulsions, restored the voice in aphonia, and checked hemorrhages in the nasal passages, throat, bowels, uterus, bladder, etc.; removed warts, nævi, hairy and other abnormal growths; amputated tumors upon the scalp, in the ear, nasal passages, throat, rectum, urethra, uterus, etc. I have used it to advantage as a cautery in some of the syphilides, chancroids, and other ulcers; caused the entire or partial absorption of large and small tumors; obliterated aneurisms and venous tumors.

The electric light is of great assistance in the examination of cavities and passages where it can be used. The electromagnet has become the surgeon's chief detective. Let us not infer from this that electricity is a universal panacea. While it can be used to great advantage in many instances, it cannot as yet replace the knife or medicine in the hands of skillful physicians. Upon certain individuals its effects

are always disagreeable. I have had patients to scream even before the current was turned on, and others (as if dreading electrocution) would refuse to touch the electrodes. At times I have known it to intensify instead of relieve muscular or neuralgic pains, but these are rare exceptions.

Through the experience of forty years I have learned that electricity, although it is yet in its infancy, has a scope far greater than that of any other remedial agency. Therefore, I think the time has come when every physician should use electricity in his practice; but in order that this may be accomplished, there must be a great reduction in the prices of all electro-medical appliances.

If all that is superfluous and gaudy in the electro-medical appliances now upon the market was left out, they could be manufactured at prices within the reach of every physician in this broad land.

DISCUSSION ON DR. LEHARDY'S PAPER.

Dr. Wm. Perrin Nicolson of Atlanta: I have been specially interested in this paper, because I am one of those doctors who believe in electricity. There is no one subject upon which there seems to be a greater diversity of opinion than this, a large number of practitioners claiming that no good can be obtained from it, and others claiming that it is a panacea for everything. In a great many of the troubles of which he has spoken I have seen so much good from the use of electricity that I am a constant user of it in some form. I would speak more especially of the application of the galvanic current to joint injuries where there is stiffness left after an injury or inflammatory trouble, especially with effusion in the joint. It seems to me I have gotten very rapid results from the application of the galvanic current directly through the joint, causing absorption and rapid restoration of the function of the joint.

It was my pleasure to report at the Charleston meeting of the Southern Surgical and Gynecological Association a case of enormous nævus in a little child as large as a hen's egg, projecting from the side of the neck in the post-maxillary groove, where after prolonged treatment covering a year, during which time I made experiments with all kinds of currents and with needles, I finally absolutely caused the entire disappearance of the growth without the loss of a particle of skin and without a resulting scar to the child. It is a case that I am satisfied was beyond the reach of the knife. The child would have bled to death. It was impossible to ligate it to get at the base of it. In the removal of that nævus I experimented with various currents, and I found in the literature of the subject, which was meager, that some recommended the positive and some the negative pole, and others both; but I am satisfied that the proper treatment for a nævus, where we want to make a cure, is to plunge the positive pole into the nævus and to place the sponge of the negative pole at a different point. The negative pole plunged in causes rapid decomposition, while the positive, which is the coagulating side of the battery, causes a gradual constriction, which finally obliterates the tumor. I believe that the possibilities in that line of surgery especially are so great, that the time will come when it will supersede all operations for nævus upon the face, more particularly in girls, where we know what horrible scars are left by surgical work, often the scar being as bad, practically, as the nævus was before operation.

I can hardly find words to express my approbation of the many valuable suggestions that Dr. LeHardy has brought out in his paper.

Dr. Willis Westmoreland of Atlanta: Just a word or two in reference to this paper. The doctor mentioned electricity in connection with torticollis. I would like to ask

him whether he did not mean wry neck, that sometimes occurs temporarily

Dr. LeHardy: Yes, that is what I meant.

Dr. Westmoreland: In regard to the use of electricity, I am as well satisfied of the advantages of it in certain instances as any one. I think the unfavorable results following the use of electricity in some cases are largely due to a lack of knowledge of its use on part of the average physician. Very frequently the physician does not know the difference between the different batteries, and he uses whatever battery he happens to have in any particular trouble that comes under his observation that he thinks needs electricity, without a thorough fundamental knowledge in regard to the uses of it. He fails to distinguish between the different currents and their application in individual cases. Electricity is a valuable and efficient remedy when properly applied. Personally, I have been very much like the pendulum of a clock with regard to this agent. I think at times I have swung to both extremes, but the clock has stopped running now, and my pendulum is hanging in the middle.

In regard to the use of electricity in general troubles, my experience has been that when combined with massage it is one of the most efficient remedies we have.

As to the statement made by some that electricity causes absorption, I think it is generally more dependent upon the surgical principle of rest. Probably the rest stops the irritation, and the effusion naturally ceases as a result of it. It is claimed that the continuance of electricity in these cases causes stimulation of the nerves, and through it absorption, but so far as the direct effect upon the effusion in a joint is concerned, I do not think it amounts to anything.

With reference particularly to the use of electricity in surgery, and more especially that form of it which has fallen into the hands of charlatans in the treatment of urethral

strictures by electrolysis, I am satisfied a great deal more harm has been done than good. I believe the men who promulgated the idea or taught electricity along this particular line were looking through the rear end of an opera glass, and that their observations were not simply based on the results obtained in these cases. In my office I have had several patients—personal friends—who left my treatment and passed into the hands of other practitioners, and I have now quite a collection of strictures in bottles that were supposed to have been removed by electricity. The portion of the urethra where the strictures were, according to their statements, does not seem to have been relieved at all, and the trouble seems to have been aggravated. In some cases where a patient has a spasmodic stricture, and a sound is introduced after the electricity is turned off, it will relieve the irritation posterior to where the contraction is situated. In some cases practitioners who use electricity judiciously get good results. In cases of organic stricture, by the use of a strong current in trying to cause absorption of the inflammatory deposit, I am certain that in nine cases out of ten the results will be disastrous. Dr. Newman, Dr. Keyes, and others, who are acknowledged experts with electricity in urethral work, have had excellent results in treating strictures. But these gentlemen thoroughly understand the fundamental principles of it, and know how to use it. Dr. Newman is the god of electricity in urethral work. A large proportion of the cases treated by incompetent practitioners have not been benefited by the use of this agent, and in many cases serious damage has been done to the urethra, from which the patients do not recover. Electricity in the hands of charlatans is, therefore, a weapon of damage, but in the hands of an experienced man who has studied the principles of it, I agree with Dr. LeHardy that it is not only a very valuable but an efficient remedy, and one that the profession cannot do without; and with a more

thorough understanding of it, and the construction of instruments more suitable for its application, it will undoubtedly increase in use and efficiency.

Dr. LeHardy (closing the discussion): I simply wish to say that in the treatment of strictures, electricity is sometimes useful in assisting the passage of a metallic bougie. I think all those physicians who have had much experience in urethral work fully understand *that force should never be used in passing an instrument into the bladder.* The instrument should be *guided* by the surgeon and allowed to *slide* by its own weight. In some cases of urethral stricture the passage of the bougie is prevented by a muscular contraction due not to the stricture itself but to nerve irritation. In such cases a mild galvanic current applied through the bougie will soon overcome this contraction.

REPORT OF PART OF MY SURGICAL WORK FOR THE SIX MONTHS ENDING APRIL 15, 1895, WITH REMARKS.

BY J. B. S. HOLMES, M.D., ATLANTA.

I herewith beg to submit a condensed report of some of my surgical work for the past six months, all done in private practice, and most of it in my Sanatorium.

Many of the cases are commonplace and devoid of any special interest, while others are quite worthy of your attention. In no case has an ovariotomy been performed simply for the relief of nervous or reflex symptoms. I have operated only for disease; a condition that I knew could only be relieved by surgical procedure. Careful examination, post-operative, has confirmed my opinion in every instance.

While I believe in conservative measures, the most radical are often the most conservative. I am ready to admit that the abdominal cavity has often been ruthlessly invaded and organs removed that should not have been touched. They have been removed for nervous symptoms due entirely to other causes, and for which they were in nowise responsible. On the other hand, tinkering gynecology, I am sure, is responsible for many diseased tubes and ovaries that can only be cured by removal. The introduction of various caustic remedies into the uterus, causing destruction and sloughing of the mucous membrane, with a cervical canal in many cases previously constricted, or so rendered by the applications that the decomposing masses cannot pass out. What follows? A septic endometritis, which soon extends to the tubes and ovaries, producing trouble

that nothing but the knife will relieve. This must be resorted to, or the poor woman is frequently doomed to permanent invalidism—a condition sometimes worse than death. Many of the cases that the surgeon is censured for using the knife upon are caused by such treatment. I do not condemn all local treatment. Properly directed, I believe there are many conditions where it is not only admissible, but demanded. Often in these conditions cures are made, especially where the local treatment is supplemented by constitutional measures, for oftentimes local troubles are clearly the result of constitutional vices. I do condemn, however, in the strongest terms, the reckless, haphazard, and indiscriminate introduction of the various caustics into the uterus; certainly none should be introduced without first providing for thorough drainage. The want of cleanliness on the part of many physicians when making vaginal and uterine examinations is often a potent factor in causing uterine and pelvic disease. Not only should the hands and instruments be clean, but the vagina and cervix should be thoroughly cleansed and disinfected before an instrument of any kind is passed into the uterus. How many of you have seen your professional brothers swab the uterus with all sorts of medicaments, using dirty cotton on an equally unclean applicator, never cleansing the vagina and cervix, and even passing a sound into the uterus that had been passed in perhaps a dozen others without coming in contact even with soap and water. While the uterine sound is a valuable instrument in its place, there are but few instances where it is required. I believe it has done more damage to women than all other instruments combined, and it not only has been but is still too indiscriminately used. Stem pessaries have made many victims for the surgeon's knife. With the possible exception of the uterine sound, they have done more harm than any other instrument or appliance.

Understand me, I do not think that every diseased ovary should be removed; far from it. I decline operation in many cases where the patient is anxious for it. I try to be conscientious and operate only where the disease is so advanced that it has or is likely to render the woman an invalid, and is incurable by any other means.

CASE 1.—Miss M., aged thirty-eight, Georgia. Noticed a small lump in the left mamma in the spring of 1894. This gradually grew, and I saw her in the fall of the same year. The darting pains through the mamma and left side of the chest, at times, were quite severe. When examined, the tumor was about the size of a hen's egg, extremely hard and quite sensitive. No involvement of the axillary glands; her general health not good; no history of cancer in the family. After purging her well, the skin over the gland was thoroughly cleansed with oil of turpentine, then tincture of green soap, then with a bichloride solution, one to one thousand. An elliptical incision, in the direction of the fibers of the pectoralis major muscle, was made, and the entire gland removed, leaving bare the muscular tissue underneath. The wound was thoroughly cleansed with boiled water and made dry with sterilized gauze. A rubber drainage-tube was laid in the bottom of the wound, extending its entire length. The edges were brought well together, silkworm gut being used as sutures. A dressing of sterilized gauze and absorbent cotton was applied over the incision and held in place with adhesive straps, and then bandages around the chest. At the end of forty-eight hours the drainage-tube was removed, when perfect union in the entire length of the incision was found. She has had no indications of a return of the disease, is free from pain, and her general health much improved.

CASE 2.—Mrs. S., aged thirty-eight, multipara, Georgia. Menstruation regular, but too profuse for the last three years, lasting from eight to twelve days; bearing-

down pain in lower part of abdomen, backache, leucorrhea; has suffered for five years with hemorrhoids. Curetted uterus, irrigated it with bichloride solution one to two thousand, afterwards packing it with iodoform gauze. Five hemorrhoidal tumors were ligated, and afterwards cut away, and the base touched with pure carbolic acid. The gauze was removed from the uterus on the fifth day. The hemorrhoids have been entirely cured, and there has been no return of the menorrhagia.

Case 3.—Miss E., aged thirty-five, Alabama. Came under my observation in October, 1894, suffering with intense headache, chiefly in the occipital region, insomnia, severe indigestion, extreme nervousness, frequent and painful micturition, intense backache, inability to walk, severe pain in the right iliac region, greatly increased when riding or standing, pain frequently of a throbbing character; menstruation regular, but intensely painful for twenty-four hours before and for twenty-four to thirty-six hours after the flow commenced. Upon examination, I found the right kidney loose, the right ovary prolapsed, enlarged, extremely sensitive, and firmly fixed by inflammatory adhesions in Douglas's sac; the left also prolapsed, considerably enlarged, and quite sensitive. On October 18th, after the usual preparation, both ovaries and tubes were removed. My diagnosis was confirmed in every particular. Both ovaries were found filled with numerous cysts, and almost the entire stroma destroyed. She left the Sanatorium December 1st free from pain, digestion much better, sleeping well, and nervousness greatly improved. She has continued to improve, as recent letters have indicated. She was, however, advised that before her nervousness entirely disappeared it might be necessary to anchor the loose kidney. This I shall do during the coming summer, unless she is so comfortable as to render the operation unnecessary.

CASE 4.—Mrs. S., aged twenty-eight, multipara, Florida. Consulted me in October, 1894. She was having profuse menorrhagia, in consequence of which she was quite anemic; suffering from severe headaches, insomnia, indigestion, constipation; excessively nervous and weak, constant dragging and bearing down pain in the pelvis, and unable to stand or walk without great discomfort. Upon examination I found her uterus very much enlarged, with a bilateral cervical tear and a *severe* laceration in the pelvic floor. On the 18th of October the uterus was curetted, and a large quantity of granulations removed. It was irrigated with a solution of bichloride of mercury, one to two thousand, after which it was packed with ten per cent. iodoform gauze, which remained five days. After removal of the gauze a tampon saturated with boro-glyceride and glycerine was applied to the cervix every second day, and allowed to remain twenty-four hours. After removal of this a hot douche was given. On November 6th the laceration in the cervix was repaired, using silkworm gut as sutures. On December 1st the repair of the pelvic floor was made. I made separate operations, as I was fearful of breaking down the adhesions in the pelvic floor in attempting to remove the sutures from the cervix. In doing double operations of this character I frequently use catgut sutures for the cervix; but, in this instance, the lacerations were so deep, extending to the vaginal juncture, that I deemed it best not to depend upon catgut, which, in my hands, has not always proven a satisfactory suture. Both operations yielded beautiful results. She left the Sanatorium December 22d, since which time her health has steadily improved, as she writes me, under recent date, saying that she is doing well in every particular.

CASE 5.—Mrs. C., aged twenty-one, nullipara, Kentucky, married two years. Began to menstruate at fifteen without pain until marriage. Up to marriage had been in excel-

lent health, weighing one hundred and forty-three pounds. Soon after marriage suffered an attack of pelvic peritonitis, and from that time until she came under my observation her health had steadily given way, and when I saw her she only weighed ninety pounds. Suffered with insomnia, no appetite, poor digestion, constipation, frequent and painful micturition, backache, intense pain in the pelvis, most severe on the left side; constant bearing down sensation while standing or walking. On examination found the uterus firmly fixed, the left ovary and tube very much enlarged, also fixed, extremely sensitive and tender. The right also fixed and enlarged, but not to the same extent. An ovariotomy was done October 20th, and upon opening the abdomen I found the ovaries and tubes adherent to everything within their reach. After much difficulty the adhesions were broken up and the ovaries and tubes removed. The abdomen was thoroughly irrigated with boiled water at a temperature of one hundred and five and glass drainage used, the tube remaining forty-two hours. Her recovery was uninterrupted, and she is to-day in perfect health; free from pain, good appetite, perfect digestion, sleeps well, and weighs one hundred and twenty-five pounds. The left tube and ovary were both filled with pus, the right tube filled with blood and the right ovary cystic.

Case 6.—Mrs. S., aged twenty-seven, multipara, Florida. Menstrual history good up to the birth of first child, after which scant and painful; suffering with headache, insomnia, frequent micturition, constipation, poor digestion, pains in lower part of abdomen, bearing down sensation when standing, severe backache, intense burning sensation in left side. Physical examination revealed uterus enlarged, chronic endometritis, pelvic floor lacerated, left ovary quite sensitive. On October 20th curetted and irrigated the uterus and then packed with iodoform gauze; at the same time repaired laceration in pelvic floor. She left the

Sanatorium November 29th with pelvic floor entirely restored and general condition much improved.

CASE 7.—Captain D., aged fifty-six, Alabama, came to my Sanatorium October 20th, intensely weak, pulse one hundred and thirty, temperature one hundred and two, swelling in right iliac region as large as a fetal head. He stated that two weeks before he was seized with a severe pain about three inches to the right and a little below the umbilicus, accompanied with high fever, constipation, and vomiting. He was treated for liver disease until he became so alarmed about his condition that, as ill as he was, he left home and came to Atlanta, consulting my friend, Dr. E. H. Richardson, who promptly referred him to me. Upon examination I diagnosed perforative appendicitis with suppuration. His condition was so extreme that I operated within an hour after he came into the Sanatorium. He was given a hypodermic of strychnia, one-thirtieth of a grain, the skin over the abdomen was cleansed thoroughly with oil of turpentine, green soap, and then a bichloride solution, one to one thousand. An incision was made from McBurney's point, extending two inches downward. Just as my knife entered the abscess sack, he coughed, and the pus spurted at least three feet high. About a quart of extremely fetid pus was discharged. The cavity was thoroughly irrigated with boiled water, after which peroxide of hydrogen was freely used and the cavity packed with iodoform gauze. I did not search for the appendix, which I am sure had been entirely destroyed by suppurative process. The dressings were removed each day and peroxide of hydrogen used and the packing of iodoform gauze reintroduced. His improvement was continuous, and he left the Sanatorium November 19th, with the wound entirely healed and he in excellent condition. His health has continued good, as letter of April 11th states.

Case 8.—October 28, 1894, I was called to a neighboring village, twenty miles distant, to see Mrs. D., aged fifty-six, multipara. Upon my arrival I found that two weeks before she was seized with severe pain in the right iliac region, followed by considerable fever, accompanied with sick stomach. She presented the usual symptoms of perforated appendicitis. At the time I saw her a distinct tumor could be felt in the right iliac region. She had a temperature of one hundred and two and a half, pulse one hundred and twenty-five. It was then six o'clock in the evening, but her condition was so grave that I decided to operate immediately, and did so by lamplight. The incision was made just below McBurney's point, and about twelve to fifteen ounces of pus evacuated. The cavity was thoroughly irrigated with boiled water and then peroxide of hydrogen freely used; after which the cavity was packed with iodoform gauze, and a dressing of absorbent cotton applied. The gauze was removed each day, peroxide freely used, and the gauze reintroduced. I did not see her again, but her recovery was uneventful. A letter received from her four weeks after the operation stated that she was then perfectly well.

Case 9.—Miss S., aged twenty-one, Georgia. Menstruation began at fifteen, regular and without pain for four years. For two years before coming under my care menstruation had been extremely painful. Constant and severe headaches, with intense pain in back, and heaviness and pain in lower part of abdomen. Pain frequently of a throbbing and lancinating character. Upon examination I found the right ovary prolapsed, very much enlarged, and intensely painful to the touch; the left ovary somewhat enlarged, exquisitely sensitive and in Douglas's sac. An ovariotomy was done October 30, both ovaries and tubes being removed. Examination of the specimen showed both ovaries nearly destroyed by cystic degeneration.

Within a week after the operation she was entirely free from pain and left the Sanatorium December 12th, in excellent condition; indeed, she is quite well.

CASE 10.—Mrs. H., aged twenty-three, nullipara, Florida. Menstruation began at seventeen and continued without pain up to two years before consulting me, which she did in October, 1894. She was married nine months before I saw her, since which time her menstrual pain had been greatly increased. She gave a clear history of pelvic peritonitis occurring soon after marriage, Pain in abdomen most intense on right side; headaches, severe backache, inability to stand or walk with any comfort, constipation. Upon examination found right ovary enlarged, prolapsed, firmly adherent, and acutely sensitive; left ovary enlarged and firmly fixed in Douglas's sac. Both ovaries and tubes were removed November 22d. The adhesions were easily broken up, as they were of recent standing and no drainage used. Both ovaries were filled with fluid and both tubes entirely occluded. She left the Sanatorium December 25th, free from pain. Has steadily increased in weight, and at this time is entirely well.

CASE 11.—Miss M., aged twenty-three, Alabama. Direct inguinal hernia. An incision was made directly down to the hernial sack, the hernia reduced and the columns on each side of the ring brought together with buried sutures of silkworm gut. The skin was closed with silkworm gut sutures and a dressing of sterilized gauze applied. She left the Sanatorium December 19th, entirely relieved and has continued so up to the latest advices, April 1st.

CASE 12.—Mrs. H., aged thirty-two, multipara, North Carolina. Menstruation profuse and intensely painful, severe headaches, insomnia, acute pain in the back, bearing down sensation in pelvis, inability to stand or walk. Had not walked a step in nine months. A confirmed opium habitué. Upon examination I found the right ovary pro-

lapsed and fixed in Douglas's cul-de-sac, and I think the most sensitive of any I have ever touched. The left ovary was prolapsed and cystic, about the size of a hen's egg: uterus retroflexed and considerably enlarged. On November 22d I removed both ovaries and tubes, elevating the uterus by shortening the round ligaments which were included in the ligatures encircling the ovarian pedicle. She left the Sanatorium December 24th free from pain and walking without discomfort. She is now attending to her household duties and in perfect health. Was entirely free from the opium habit before leaving the Sanatorium and has so continued. This patient had had local treatment continuously for two years before coming to me.

Case 13.—Mrs. J., aged thirty-one, multipara, Georgia. Menstruation extremely painful, but regular. Intense headache, insomnia, appetite poor, digestion bad, suffering pain in back and lower portions of abdomen, greatly increased by standing or walking, and a dragging-down sensation when on her feet. Upon examination I found a double laceration of the cervix and a badly lacerated perineum. The left ovary as large as an egg and filled with fluid; right not quite so large, but prolapsed and lying immediately behind the uterus. An ovariotomy was done November 27th, and she left the Sanatorium December 24th, entirely free from pain and in good condition. I explained to her, however, that it would probably be necessary, a few months later, to repair the lacerations in the cervix and perineum, which I shall do if there is any return of the nervousness or dragging-down sensation in the pelvis.

Case 14.—Mrs. G., aged thirty-four, primipara, Alabama. Headache, constipation, frequent and painful urination, very nervous, pain in the abdomen, shortness of breath, palpitation of the heart, intense backache, greatly increased since second marriage six months ago. Upon examination found right ovary fixed, enlarged, and very tender; left

in about the same condition as right. Uterus large and immovable. An ovariotomy was done December 5th. The adhesions were very dense and numerous. The ovaries and tubes were enucleated with great difficulty. The abdomen was thoroughly irrigated with boiled water, and a glass tube inserted, the tube remaining twenty-six hours. She returned home January 15, 1895, entirely free from pain, and at last advices was doing well in every particular.

CASE 15.—Mrs. G., aged thirty-eight, multipara, Georgia. Menstruation regular, but very painful, dizziness, intense headache, no appetite, digestion poor, constipated, painful urination, extremely nervous. Found floating kidney on the right side; left ovary extremely sensitive and cystic; right prolapsed, cystic, very sensitive. Did an ovariotomy December 5th. She left the Sanatorium January 14th, much improved in every respect. I explained to her that it might be necessary to anchor the loose kidney before she was entirely cured, but advised her to wait six months before having it done.

CASE 16.—Miss H., aged twenty, Georgia. Menstruation regular, but extremely painful, constant and intense backache, greatly increased when standing or walking; in fact, so severe as to make it almost impossible for her to walk or stand. Sharp pain low down in right side, frequently of a throbbing character, and always intensified when standing. Insomnia, frequent headaches, constipation, urination scant and painful, no appetite, poor digestion, quite anemic. Had spent most of the time for the past three years in bed. Right ovary enlarged to near the size of a hen's egg, and completely destroyed by cystic degeneration; left also cystic, prolapsed, and extremely sensitive. Ovariotomy done December 6th, removing both ovaries and tubes. Her convalescence was rather tedious, a mild phlebitis developing in the left leg at the end of the second week. This rendered her convalescence rather

slow, and she left the Sanatorium February 6th, improved, but not entirely relieved. Her improvement, however, since that time has been continuous. I saw her March 31st. She was able to walk wherever she pleased, ate and slept well, free from pain, had gained considerable in flesh, and expressed herself as being well and happy.

Case 17.—Mrs. D., aged thirty-six, multipara, Florida. Menstruation regular but with great pain, violent headache, insomnia, no appetite, poor digestion, constipated, nausea, intense pain in back and lower abdomen, extending down the thighs; unable to walk, and had been confined to her bed for six months; an invalid for fifteen years. Had been treated locally much of the time for the past ten years. Found floating kidney on the right side, uterus enlarged and retroflexed, right ovary the size of a guinea's egg, firmly fixed in Douglas's sac; the left ovary prolapsed, cystic, sensitive. Ovariotomy performed December 18th, removing both ovaries and tubes and elevating uterus. Her convalescence from the operation was satisfactory in every particular. On February 5th the right kidney was anchored. I made an incision about two and one-half inches from the spine, beginning at the lower border of the twelfth rib and extending three and one-half inches in an oblique direction towards the crest of the ilium. When the kidney was exposed the capsule was incised and folded back one-fourth of an inch on each side. Four silkworm gut sutures were passed through the muscles, the fatty capsule of the kidney, and through the kidney tissue. Twelve strands of silkworm gut were placed on the kidney and brought out at the upper and lower angles of the wound. The kidney was pressed firmly in position by the hand of my assistant, then three additional sutures of silkworm gut were passed from the skin through the muscles, fatty capsule, and kidney tissue. The four deep sutures were drawn moderately tight and tied, cut close, and the

cutaneous wound closed by the three deep sutures and several superficial ones. A dressing of sterilized gauze and absorbent cotton was applied over the wound, and a pad of gauze was applied over the kidney, on its anterior aspect, and held in position by rubber straps passing half round the body. On the eighth day the silkworm gut threads were removed and also the sutures. Perfect union had taken place throughout the entire length of the wound. The abdominal pad was worn for about thirty days. At this date, April 9th, the kidney remains firmly fixed, and the patient is walking about the Sanatorium, and will return to her home on the 20th, comfortable and happy.

CASE 18.—Mrs. K., aged twenty-five, nullipara, Mississippi. Menstruation began at fourteen with considerable pain, which has gradually grown worse from year to year. Since marriage, October, 1893, the pain had greatly increased, had cramping pains in lower part of abdomen, severe pain in back, extending down the thighs, menstrual flow scant, intense headache, insomnia, no appetite, digestion bad, bowels constipated, painful urination. Her condition had steadily grown worse in every particular since marriage. Examination showed both ovaries enlarged and very sensitive. Ovariotomy was peformed on December 18th, and both ovaries found almost destroyed by cystic degeneration, and both tubes entirely occluded, the right filled with serum. The patient was extremely weak and very anemic, but before going home, February 10th, had gained some strength and flesh, and recent advices indicate a steady improvement in her condition.

CASE 19.—Mrs. H., aged thirty-five, nullipara, Georgia. Menstruation began at sixteen, always painful and very profuse, severe headache, no appetite, poor digestion, constipation, painful urination, and a feeling of constant pressure on the bladder. Suffered for three years with intense pain in abdomen, much greater in the region of the ovaries;

very excitable, great mental disturbance. Had been treated locally for three years. On examination I found the uterus enlarged and fixed, the right ovary as large as a goose egg, tube very much enlarged, and both firmly fixed. The left ovary and tube also fixed, the tube considerably thickened and ovary cystic. Ovaries and tubes removed December 21st. Adhesions were very dense and strong, and appendages were removed with the greatest difficulty. The right ovary was ruptured in removing it and a large quantity of dark colored fluid discharged. The abdomen was thoroughly irrigated with boiled water, and glass drainage used, the tube remaining in twenty-four hours. The right tube, upon examination, was found filled with blood, the left ovary and tube filled with serum. Both tubes entirely occluded, and ovaries and tubes studded with papillomatous growths. Union of the abdominal incision in this case was interrupted by several stitch-hole abscesses, produced no doubt by the stitches being too tightly tied. She left the Sanatorium January 23d, since which time she has continued to improve, and is now in full control of the care and management of a large hotel.

CASE 20.—Mrs. S., aged forty-two, multipara, Georgia. Severe pain in the abdomen and bearing down sensation when standing or walking. Intense backache, with pain extending down the limbs, no appetite, poor digestion, constipated, painful urination, menorrhagia. Very weak and anemic. Upon examination I found the uterus enlarged and retroflexed, pelvic floor badly lacerated, right ovary tender and somewhat enlarged: the left prolapsed, exquisitely tender. December 27th, I curetted the uterus, irrigated it with bichloride solution 1 to 2,000, packed with iodoform gauze, and repaired the laceration in the pelvic floor at the same time. On January 21st, both ovaries were removed, together with the tubes, and the uterus elevated. She left the Sanatorium February 19th in good

condition. Recent letters tell of her continued improvement, with a gain of fifteen pounds in weight.

CASE 21.—Mrs. N., aged thirty, nullipara, Georgia. Severe headache, no appetite, indigestion, constipation, frequent and painful urination, backache, pain in lower part of abdomen, increased by standing or walking. Pain in both iliac regions, but worse in the left. Painful menstruation, particularly so for twenty-four hours before the flow began. Very nervous and quite weak and anemic; some temperature in the afternoon. Upon examination, I found the right ovary prolapsed, tender, the tube very much thickened; left ovary prolapsed and firmly fixed to the side of the uterus and tube considerably enlarged. Ovaries and tubes removed January 5th. The right ovary contained a number of cysts. The left contained about a teaspoonful of pus, and both tubes were entirely occluded. She left the Sanatorium February 11th, free from pain, with good appetite, good digestion, sleeping well, nervousness greatly relieved. She writes me about a month after going home that she walks where she pleases and suffers no pain when either walking or riding; that appetite and digestion have continued good, and she is entirely well in every particular. She had been under the care of several physicians and had had local treatment for many months.

CASE 22.—Mrs. T., aged thirty-eight, multipara, Georgia. Consulted me early in December last on account of a menorrhagia that had continued for several weeks, rendering her extremely weak and anemic. Upon examination I found the uterus very large, with a bilateral laceration of the cervix. She was curetted December 13th, after which the uterus was irrigated and packed with iodoform gauze. On account of the cystic degeneration of the cervix, a trachelorrhaphy was not done until the parts were properly prepared. On January 24th, the lacerations in the cervix were repaired, resulting in perfect union.

She has had no return (April 10th) of the menorrhagia, although she has menstruated regularly, both as to time, duration, and quantity.

Case 23.—Mrs. M., aged twenty-eight, nullipara, Georgia. Intense headache, appetite variable, digestion very poor, bowels constipated, menstruation regular but intensely painful; severe backache, pain in lower part of abdomen, but much more severe on the right side. Had been bedridden for five years. Very weak and anemic. On examination found ovary very large, extremely sensitive, and about the size of a guinea's egg. Left tube and ovary both prolapsed and firmly fixed by inflammatory adhesions. She had had several well defined attacks of pelvic peritonitis. Both ovaries and tubes were removed January 5th. The adhesions were particularly dense and strong, especially on the left side. The abdomen was thoroughly irrigated with boiled water and glass drainage used, the tube remaining seventeen hours. Both ovaries were filled with a cheesy mass, evidently tubercular in character. Both tubes contained a small quantity of the same material. She is of tubercular family. She left the Sanatorium March 22d strong enough to go where she pleased about the building, eating and sleeping well. Her improvement has been continuous and satisfactory since her return home. She had been treated locally for five years.

Case 24.—Mrs. B., aged thirty, multipara, Georgia. Suffered from insomnia, extremely nervous, no appetite, poor digestion, constipated, bearing down pain when standing or walking; menstruation regular but too profuse. Upon examination found a bilateral laceration of the cervix and a badly lacerated pelvic floor. Uterus curetted and laceration in the cervix repaired January 9th. Three weeks later the lacerations in the pelvic floor were repaired. Perfect union in both operations. She left the Sanatorium February 19th in good condition, and has steadily improved.

CASE 25.—Miss S., aged twenty-two, Georgia. Intense headache, insomnia, no appetite, wretched digestion, constipation, painful urination, pain for two or three hours after defecation very intense. Menstruation began at fourteen, with little pain for three years, after which, intensely painful for the next three years; since which time the flow has ceased altogether; profuse leucorrhea, severe abdominal pains, intense backache, extending down the limbs. Was extremely nervous, very anemic. Upon examination found a floating kidney on right side, position of womb normal, left ovary and tube in Douglas's pouch, firmly fixed; right ovary enlarged and very sensitive. Fissure in the anus. January 15th, both ovaries and tubes were removed, and the sphincter ani thoroughly stretched; fissure curetted, incised and touched with pure carbolic acid. Upon examination of the specimens, found both ovaries entirely destroyed by cystic degeneration and both tubes occluded. She left the Sanatorium April 2d, considerably improved, but not well.

CASE 26.—Mrs. F., aged fifty, Georgia, had suffered for several years with hemorrhoids and intense pain in rectum after defecation, sometimes lasting for hours. Intensely nervous, with no appetite, poor digestion, very weak. Examination revealed five or six hemorrhoidal tumors and two fissures in the anus; one posterior, the other lateral. On January 22d, the sphincter ani was thoroughly divulsed, the fissures curetted, incised, and touched with pure carbolic acid. The hemorrhoidal tumors were removed by ligation. She left the Sanatorium February 27th, entirely relieved. I saw her during the first week in this month, and she now has no pain whatever when the bowels act; has gained in flesh and strength, and expresses herself as being entirely cured, well and strong.

CASE 27.—Mrs. G., nullipara, aged twenty-three, South Carolina, married two years. In excellent health up to

a few months after marriage, when she had an attack of pelvic peritonitis; since which time she had suffered with an intense burning pain in the top of the head, pain in the back and limbs and in right side, greatly increased by standing or walking. Appetite good, digestion poor, bowels constipated, very nervous. Upon examination found the right ovary enlarged, prolapsed and fixed; left also enlarged and exceedingly tender. Both ovaries and tubes were removed January 29th. The right was entirely destroyed by cystic degeneration, the left also septic; both tubes occluded. She left the Sanatorium March 9th, in a satisfactory condition in every respect.

Case 28.—Mrs. L., aged eighteen, nullipara, Georgia, three and a half months advanced in pregnancy. In excellent health up to a month before consulting me; since which time she had suffered most agonizing pain in the rectum, coming on shortly after defecation and lasting for hours. Upon examination I found a large and angry fissure. Notwithstanding her condition, I advised operation, as I felt assured that if she continued to suffer as she was doing, abortion would be the result. On February 1st, the sphincter ani was thoroughly divulsed, the fissure curetted, incised, and touched with carbolic acid, and a two-grain opium suppository inserted into the rectum. A drachm of Hayden's viburnum compound was given every six hours for the first two or three days, after which it was given two or three times in the twenty-four hours for about a week. At no time did she have the slightest uterine pain. She returned home February 14th, entirely relieved. I saw her on the 5th inst., when she told me that she had not had the slightest return of her trouble, and was as comfortable and as well as she could possibly be in her condition.

Case 29.—Mrs. A., aged twenty-seven, multipara, Georgia. Appetite poor, digestion bad, constipation, headache, extremely nervous; had suffered two years with

uterine trouble, and been treated locally by various remedies. Since birth of her last child nine months before, she had been in bed most of the time, being unable to stand or walk without extreme discomfort from bearing down and pressure in the abdomen. Upon examination I found a floating kidney on the right side, a badly lacerated pelvic floor, with the vagina more distended or stretched than I have ever seen one, the result of full and continuous packing with wool. The pelvic floor was repaired February 5th, and she returned to her home March 10th. A letter received April 1st states that she eats what she pleases, is looking after her housekeeping, and suffers no inconvenience from walking.

CASE 30.—Mrs. D., aged thirty-two, multipara, Texas. Suffered with intense headache, insomnia, indigestion, severe backache, leucorrhea, and a bearing down sensation in the abdomen when standing or walking. Upon examination found the left ovary prolapsed and sensitive, but not much enlarged; uterus retroflexed; bilateral laceration in the cervix; badly lacerated perineum. February 10th curetted uterus and repaired laceration in the cervix and pelvic floor. She left the Sanatorium February 28th. For two weeks after leaving the Sanatorium her improvement was not satisfactory, but since that time, as I am advised by letter dated April 6th, she has improved quite rapidly, is entirely free from headache and backache, good appetite, good digestion, and has gained several pounds in weight.

CASE 31.—Mrs. S., aged thirty-five, multipara, Georgia. Monday afternoon, February 11th, while walking across her sitting-room was suddenly seized with an intense pain in the left iliac region. The pain was so severe that she had to be lifted to bed, in a swooning condition. Her husband, who is a physician, was not at home at the time, but arrived shortly afterwards to find his wife in a fainting condition and suffering most intense agony. He immediately

gave restoratives and anodynes and invited two professional friends to see her. She continued to suffer during the night, and notwithstanding the free administration of stimulants she grew weaker and her condition alarming. On the following day there was no improvement, except the suffering was not so acute; pulse rapid, expression anxious, and some distention of the abdomen. On the following morning there was still more prostration, with considerable distention of the abdomen and tenderness; pulse extremely weak and rapid; a well defined peritonitis. Additional counsel was called and a diagnosis of peritonitis concurred in. There was still no improvement in her case, and I was summoned to her home in South Georgia, Wednesday night, the 13th of February. I arrived at one P. M. on Thursday. Found the patient with temperature 102 and pulse 135, extremely pallid, expression anxious, very great distention of abdomen, respiration hurried and embarrassed. The following history was given me: Had been in good health and menstruated regularly; the last regular period occurring eleven weeks before I saw her. Four weeks subsequent to that period the flow came on rather scant and lasted only a day or two. At the regular time it again returned, three weeks before I saw her. This time not so free and lasting only one day. She had suffered some with morning sickness, but not enough to make her think that she was pregnant. In passing my finger into the vagina, I detected a large boggy mass, filling up the left side of the pelvis; the uterus considerably enlarged and pushed far over to the right. I immediately diagnosed tubular pregnancy, with rupture, and urged immediate operation. The husband agreed with me, but the attending physician differed, and opposed surgical procedure. The patient herself, after having everything explained to her, also declined operation. I could not leave her home before one o'clock the following morning. Before the hour

of my departure, as she had continued to grow weaker, the husband came to me and said that he felt it his duty to urge an operation upon his wife. He did so and she consented. Strychnia had been given her, hypodermically, freely from the time I saw her, and every preparation was made for operation in the early morning. Her bowels, in the meantime, had been thoroughly evacuated by copious enemata. Early on the morning of the 15th of February, four days after the rupture, in anything but a promising condition, she was anesthetized and operated upon. Upon opening the abdomen the entire cavity was found filled with an enormous quantity of coagulated blood. Enough was removed to find the ruptured and bleeding tube. This was promptly ligated and removed. The coagulated blood (a large wash basin full, I presume, but did not stop to measure it as her condition was so extreme) was removed, the abdomen thoroughly irrigated with boiled water at a temperature of 105, and glass drainage used; the tube remaining in twenty-five hours. I regretted not being able to find the fetus which had escaped from the tube into the abdomen, and there doubtless macerated. The operation was done so hurriedly that the clotted blood, when removed, went from the abdomen to the slop basin, which was emptied before I had an opportunity to examine it. She was put to bed in almost a moribund condition. Strychnia and whisky were freely used and hot saline solution thrown into the bowels. I should have used a saline infusion in the veins, but had no instrument with me for doing so. She rallied in a few hours and her recovery was satisfactory in every particular. I had the pleasure of dining with her on the 4th instant. She is entirely well and able to go where she pleases, but of course still weak and anemic.

CASE 32.—Miss R., aged thirty-three, Georgia. Began to menstruate at twelve; regular and without pain until three years ago, since which time she has suffered intensely

at each period. Insomnia, severe headache, constipation, poor digestion, no appetite, severe backache, and intense pain in left side, frequently of a throbbing character, greatly increased when standing or walking. Profuse leucorrhea; quite weak and anemic. The uterus retroflexed, the left ovary prolapsed, resting in Douglas's cul-de-sac, about the size of a guinea's egg. Right ovary also prolapsed. Both ovaries and tubes removed February 19th. Examination of specimens after operation revealed tubes entirely occluded and both ovaries almost entirely destroyed by cystic degeneration. She left the Sanatorium March 30th, in good condition in every respect.

Case 33.—Julia S. (colored), aged forty-one, multipara, Georgia. Suffered with severe backache, extending down limbs, with bearing down pain in lower abdomen, particularly severe on left side; constipated, irritable bladder, slept badly; had had several attacks, I judge, from her description, of pelvic peritonitis. On examination I found the uterus enlarged and fixed; left ovary as large as a goose egg, and left tube nearly as large as a banana, both firmly adherent; right ovary and tube in about the same condition. Ovaries and tubes removed February 20th, and examination of the specimens showed both ovaries and tubes filled with serum. Adhesions were dense and difficult to break up. Abdomen was thoroughly irrigated and sponged dry. Would have used drainage in this case had I had a competent nurse to care for the tube. Her recovery was satisfactory in every way, except a little suppuration in the line of the incision.

Case 34.—Mrs. L., aged thirty-seven, primipara, Georgia. Confirmed invalid since birth of child seven years ago. Suffered greatly from indigestion, no appetite, constipation, headache, extreme nervousness, intense backache, pain in lower abdomen, greater on left side; bearing down sensation in pelvis when standing or walking; very weak.

Menstruation regular as to time, but too profuse, lasting from fifteen to eighteen days. She is of phthisical family, her mother and two sisters having died with it. She has a well defined tubercular deposit in the apex of right lung. Examination found left ovary greatly enlarged, prolapsed and lying under the uterus, firmly fixed by inflammatory adhesions. Right ovary also enlarged and extremely tender; perineum lacerated; uterus enlarged and retroflexed. Her ovaries and tubes were removed and uterus elevated February 21st, and she left the Sanatorium April 6th, greatly improved in every respect. I would not have operated in this case except to relieve the profuse menorrhagia and the intense pain that she was so constantly suffering. I hoped, by arresting the menstrual flow, to save her strength, and by relieving the pain caused by the imprisoned ovary, to build up her nervous system and improve her digestion, thereby enabling her to be better prepared to combat the pulmonary trouble. Dr. Hardon examined this case with me, and concurred in my opinion in every particular.

CASE 35.—M., aged forty-three, Georgia. Had suffered intensely for five years with hemorrhoids, health much broken down. Seven large tumors were ligated February 21st, the tumors cut away and the base touched with pure carbolic acid. Left the Sanatorium March 9th entirely free from pain. Am advised on April 9th that the rectum is entirely well; no pain, protrusion, or bleeding after defecation. General condition greatly improved.

CASE 36.—Mrs. DeJ., aged thirty-five, multipara, Georgia. Insomnia, no appetite, poor digestion, constipation, irregular and painful menstruation, which had been profuse for the past few months. Intense backache, pain in left side extending down the thigh, increased by standing or walking. Weak and anemic. Upon examination found the right ovary about the size of a guinea's egg, filled with cysts; left prolapsed, resting on Douglas's cul-de-sac, ex-

tremely painful and somewhat enlarged; severe laceration in pelvic floor. Urinary analysis showed a trace of albumin. Both ovaries and tubes were removed February 28th, and a perineorrhaphy done at the same time. The operation was an easy one and she was put to bed in good condition. For the first thirty-six hours she did well. At the end of that time great irritability of the stomach began; she also complained of headache. Up to this time her kidneys had acted reasonably well. Her bowels were freely emptied by high enema and she was given one-half grain calomel triturates every half hour until six grains had been taken. After giving calomel, several doses of epsom salts were given, but she doubtless vomited most of it. Enough, however, was retained to purge her well. On the third day there was some diminution in the urinary secretion, and digitalin in doses of one one-hundredth of a grain was given hypodermically every three hours. She became intensely restless and complained of severe headache on the afternoon of the third day, and bromide of sodium in doses of thirty grains was given by the bowel every three hours. Hot applications were made over the loins. At midnight of the third day the nurse noticed some delirium and called me. I found her suffering with the most intense headache. Mustard was applied freely to the spine and bromide of sodium continued. From this condition she soon went into a profound coma. The next morning I had Drs. Todd and Hagan see her with me. Both agreed with me that she was suffering with uremic coma. Sick stomach had very much subsided and she was freely purged with cream of tartar and given pilocarpine hypodermically. This line of treatment with stimulants was continued. She was made to sweat freely with the pilocarpine and sustained by nutritive enema of beef juice, whisky, lime water, and sweet milk given by the stomach. No peritonitis. At no time was she tympanitic nor did she have any tenderness over

abdomen; perfect union in both abdominal and perineal incisions, without a drop of pus in either. The above line of treatment was persevered in, but despite all our efforts she died at 10 P. M. Tuesday, five and a half days after the operation. A specimen of the urine was analyzed by Professor Harris, and I quote his report in full: "I have examined the specimen of urine sent to-day, with the following result: Reaction acid; specific gravity 1015; no sugar and but a moderate amount of albumin. The total quantity passed in the twenty-four hours was, I am informed, twenty-seven ounces. On this basis I have estimated that 13.65 grammes of urea were excreted in twenty-four hours—a quantity less than one-half the amount that should have passed. The small quantity of urine—about one-half of what should have been excreted—and the low specific gravity, very pointedly confirm the results which were obtained from the examination for albumin and urea. A considerable number of waxy tube casts were found on microscopic examination. Crystalline deposits were almost entirely absent, doubtless due to the diseased condition of the kidneys. There was neither blood nor pus present." The specimen sent him was drawn thirty-six hours before her death.

CASE 37.—Mrs. P., aged thirty-eight, primipara, Georgia. Severe headache, intensely nervous and hysterical; suffering for fifteen years, since the birth of her child, with pain in lower part of abdomen; horrible backache, greatly increased by walking or standing. No appetite, poor digestion, constipation, frequent urination, but without pain; quite weak and unable to exert herself in any particular. Upon examination I found the uterus retroflexed, the left ovary and tube in Douglas's cul-de-sac, firmly fixed and very sensitive. Right ovary prolapsed and as large as a guinea's egg. Ovaries and tubes removed March 2d, and uterus elevated by shortening the ligaments. Her conva-

lescence was uninterrupted. She left the Sanatorium April 7th in a very satisfactory condition in every particular.

Case 38.—Miss R., aged thirty-three, Alabama. Began to menstruate at fourteen; has always been regular and never suffered a great deal of pain; appetite variable; digestion poor. Had suffered with intense backache for several years, pain extending down the limbs, and greatly increased by walking; very nervous and unable to undergo any exertion. Upon examination found the right ovary prolapsed and nearly as large as a hen's egg. Left ovary firmly fixed in Douglas's sac, and extremely sensitive to the touch. Uterus in good position and normal in size. March 2d, ovaries and tubes removed. The right ovary was found entirely destroyed by cystic degeneration. The left also cystic, had about one drachm of blood in it. The left tube entirely occluded. This patient had had local treatment for more than a year before I saw her. She left the Sanatorium April 6th, comfortable in every particular.

Case 39.—Mrs. H., aged twenty-nine, primipara, Georgia. Menstruation regular, lasting five days; rather profuse, and sometimes painful. She was extremely nervous, constipated, backache, extending down limbs; dragging down sensation in pelvis when standing or walking. Found bilateral laceration of the cervix with laceration of the pelvic floor. The lacerations were repaired March 5th, and she returned to her home March 30th.

Case 40.—Mrs. L., aged twenty-six, multipara, Georgia. Six weeks before I saw her she was operated for hemorrhoids, and much redundant skin around the anus trimmed away. Firm cicatricial tissue formed, and when I saw her almost complete atresia of the anus existed. It was with difficulty that the smallest size pipe of a Davidson syringe could be introduced, and she had gone some days without a movement from the bowels, although soap and water enemata were used several times a day, and salines occasionally

taken. She was placed under the influence of chloroform, and a small pointed trivalve, rectal speculum was forcibly introduced with the greatest difficulty. The anus was then stretched to admit one of a larger size, when it was thoroughly divulsed. The bands of cicatricial tissue were then incised in their longitudinal direction, and then drawn and stitched, transversely, to the line of the incision. After scraping out a large amount of fecal matter from the rectum, a fold of iodoform gauze, an inch in diameter, was left for twelve hours in the anus. At the end of twenty-four hours she was given salines, passing enormous quantities of fecal matter. For two weeks a rectal dilator was daily introduced. Her recovery was complete and satisfactory in every particular.

CASE 41.—Mrs. C., aged thirty-seven, multipara, Georgia. Had been a confirmed invalid since the birth of her third child three years ago; in bed almost the entire time. Appetite poor; bowels constipated; frequent and painful urination, intense backache, greatly increased by standing; has not walked for three years. When she tried to stand, she said she felt as if everything in the abdomen would drop out, and the dragging down produced such acute and intense pain that she was compelled to again resume the recumbent position. Upon examination I found the pelvic floor *terribly* lacerated, the tear extending from the skin almost to the vagino-uterine juncture. Uterus retroflexed; left ovary as large as a guinea's egg and extremely sensitive; that and the corresponding tube in Douglas's cul-de-sac. Right ovary prolapsed, cystic and extremely tender. Ovaries and tubes removed and uterus elevated March 9th, and her convalescence was satisfactory in every particular. On April 9th the laceration in the pelvic floor was repaired.

CASE 42.—Miss H., aged twenty, Georgia. I regret that this patient could not tell the age at which she began to menstruate. She reports, however, that the flow has always

come regularly since it began, and always accompanied with pain. About a year ago she noticed some swelling in lower part of abdomen. For the last six months it had increased considerably, and had given her great pain, so much so as to require the frequent use of anodynes, and within the last three months the abdomen has been so large as to make it quite noticeable. She was sent to me for operation upon a supposed ovarian cyst, and from an examination of the abdomen alone a diagnosis of that kind could easily have been made. The fluctuation, however, was quite indistinct, if felt at all. Upon examination, I found a fluctuating point at the base of the bladder about one and a half to two inches below the meatus. My finger passed high into the vagina could just touch the cervix. On March 9th a free incision was made at the point of fluctuation. She must have discharged quite three quarts or more of dark, grumous material, evidently retained menstrual blood. After the cavity was thoroughly emptied I caught the cervix with a vulcellum forcep and drew it down and passed the sound into the cervix, at the same time passing the index finger of my left hand through the incision into the cavity just emptied. I could distinctly feel the point of the sound, with a membrane intervening between it and my finger. I withdrew the sound, passed the uterine dilator through the cervix and perforated the septum. I then passed two rubber drainage tubes through the cervix and through the opening in the septum and out at the point of the incision in the sack. The sack was thoroughly irrigated with boiled water at a temperature of 105° and well packed with iodoform gauze. The gauze was removed once a day, each time irrigating the cavity and repacking. The drainage tubes were removed on the third day. The irrigation and packing of the cavity was kept up for seven or eight days. The cervical canal was kept well dilated, allowing the drainage to pass off through it. She was re-

lieved and the incision had entirely healed when she returned home March 30th. This was to me a highly interesting case, clearly one of bicornate uterus, with one cervical canal and a septum dividing the two cornu of the uterus. Undoubtedly this hematometra had existed since she first began to menstruate.

CASE 43.—Mrs. K., aged twenty-seven, nullipara, Georgia. Began to menstruate at sixteen; no pain for a year, since which time has suffered intense pain during menstruation, which had continued usually about three days. Appetite poor, digestion very bad, severe headache, very nervous, bearing down pain in abdomen; worse on right side and greatly increased since her marriage seven years ago; could not walk or stand without great suffering. On examination I found right ovary and tube firmly fixed in Douglas's sac; ovary considerably enlarged and extremely tender. Left ovary quite tender, somewhat enlarged, but in normal position. Ovaries and tubes removed March 12th. She was put to bed rather weak and was given a hypodermic of strychnia one-thirtieth of a grain once in three hours, and at the end of twelve hours it was discontinued, as her circulation was good. She suffered intensely for the first few hours, so much so as to require two hypodermics of morphia, one-quarter grain each, one given ten and the other fourteen hours after the operation. These relieved her entirely, and during the next twenty-four hours her condition was good in every particular. On the morning of the third day (the 14th) she vomited quite freely. As no gas was passed up to this time, she was given a high enema of soap and water, which passed away without bringing any fecal matter or gas. She was given one-half grain tablet of calomel every half hour until twelve doses had been taken, and strychnia given in one-thirtieth grain doses every three hours, without the passage of either fluid or solid contents; indeed there was no peristalsis. I began

to suspect intestinal obstruction from either lymph bands, twisted bowels, or union to the ovarian stump. Her vomiting continued to grow worse, and at noon, fifty hours after the operation, she was given ten grains of calomel, which was repeated in three hours; but, as she vomited freely, I dare say but little of it, if any, was retained. She was then given seidlitz powders, which she also failed to retain. During the afternoon and night of the third day she had a number of enemata of soap and water, turpentine, ox-gall, etc. I was thoroughly convinced by night of the intestinal obstruction. Her pulse began to show evidence of failure and intervals between the strychnia were reduced to two hours. Friday morning, four days after the operation, there was some improvement in the circulation, she was resting some, sleeping a little and not vomiting so frequently, still no peristalsis. By noon the pulse had increased in frequency and lessened in volume, and I decided that we had waited as long as it was prudent and safe, that something must be done or death would ensue. Drs. Earnest and Todd, and my assistants, Drs. Grandy and Davis, saw her with me; all concurring as to her condition and the necessity for reopening the abdomen. At 4 P. M. the abdomen was reopened. Perfect union had taken place in every part of the wound. The ileum, at about its middle, was firmly attached to the ovarian stump on the right side. It had looped around about eight inches and attached itself again, producing a complete obstruction by lymph bands around the bowel. The adhesions were loosened, the lymph bands divided, and every portion of the intestinal tract thoroughly examined. The abdomen was freely irrigated with boiled water at a temperature of 105 and glass drainage used, the tube remaining in twenty-four hours. She was put to bed in a very weak and prostrated condition, having a small pulse of 137. By the free use of strychnia, whisky hypodermically, and hot applications to the body,

with whisky and salt water in the rectum, she gradually rallied. From that time her convalescence was uninterrupted. As I write to-day (April 11th) she is walking around her room, and expresses herself as feeling better than she has for several years. She will return to her home on the 15th instant. This patient had had local treatment for three years before coming into my hands.

CASE 44.—Mrs. W., aged twenty-five, multipara, Georgia. In good health up to November, 1894, when she aborted at three months. She did well for ten days or two weeks, when was taken with a chill, followed by high temperature, which continued for some days. She was curetted the last of November or early in December by a couple of most competent gentlemen, Drs. Greene and Davis. Her improvement was marked after the curettage, and in two weeks she was up and able to go about her room for a short time. Some time in December she was seized with a chill, followed by high fever and a general pelvic peritonitis. She continued ill until I saw her early in March. At that time she was extremely weak and in a general septic condition. She was placed upon whisky, strychnia, and chlorate of potash, with a nutritive diet and a hot douche ordered daily, with the use of a mild laxative to keep her lower bowel unloaded. She was brought to my Sanatorium March 16th, with a pulse of 110, and temperature 99 in the morning and 101 in the afternoon. She was given strychnia every three hours for the succeeding three days. On the 19th both ovaries and tubes were removed. The adhesions were very numerous, dense, and strong. Both ovaries were about the size of a turkey's egg, both tubes nearly as large as bananas, and both ovaries and tubes filled with pus. The tube on the left side was so soft at its uterine end that the ligature cut through it as it would have done through a piece of soft bread. It was necessary to pass a ligature with a needle deep into the cornu of the

uterus to secure the vessels. The abdomen was freely irrigated and glass drainage used, the tube remaining in thirty hours. She was extremely weak when put to bed, but with the free use of strychnia hypodermically, whisky and salt water by the rectum, and whisky by the stomach, she rallied and did well for a week, when her temperature began to rise, and I was convinced that pus was forming somewhere. At the end of the second week I noticed slight fluctuation in the track of the drainage tube, and opened the incision at this point, when two ounces of vile smelling pus were discharged. Peroxide of hydrogen was poured into the opening and a dressing of bichloride gauze applied. This was repeated daily. Her temperature is now normal (April 11th), her appetite good, she is sleeping well; a very slight discharge of pus, and her condition in every particular satisfactory. Her recovery is now assured.

Case 45.—Mrs. H., aged twenty-seven, multipara, Georgia. Began menstruating at seventeen; always regular, but painful; insomnia, constant headache, very nervous and hysterical, appetite and digestion poor; constipated; urinated often, sometimes with pain; had suffered two years with pain and soreness in the abdomen; intense backache; pain low down in both sides; could not stand or walk without great suffering. Had been in bed most of the time for the past nine months. Examination showed uterus to be retroflexed and right ovary prolapsed, cystic, and tender; and left ovary and tube prolapsed, tender, and fixed; slight tear in cervix and perineum. March 19th both ovaries and tubes removed and uterus elevated. Her recovery has been uninterrupted, and she is now sitting up and will return home next week wonderfully improved.

Case 46.—Miss B., aged seventeen, Georgia. Began to menstruate at fifteen; always lasting a week and quite profuse, no pain. Has always suffered with backache; constipation, poor digestion, poor appetite, slept badly and had con-

stant headache. Two years ago she began to have slight nervous attacks, followed by typical epileptic seizures. She has, in the last two years, had from one to three severe paroxysms each month, with from fifteen to twenty-five mild ones each day; a typical case of epilepsy. Her family history is good; no history, as far as I can ascertain, of epileptic trouble in either the mother's or father's family. No specific trouble, no history of convulsions in childhood, or of an injury of any character. She has been treated by a number of competent gentlemen, and has had the bromides freely administered for the past two years, with little or no apparent benefit. Upon examination I found the right ovary prolapsed, tender, enlarged. The left considerably enlarged, exquisitely tender; certainly as much so as any I have ever touched. The gentlest touch gave her the most intense pain; it was resting directly behind the uterus, very low in Douglas's sac. I explained to her and her mother that I could find no other cause for her epileptic trouble, which, in my opinion, was from reflex irritation from the diseased ovaries. At any rate, a very thorough line of treatment had been given without benefit to her, and while I could not promise a cure, I thought the removal of this supposed cause offered her more promise of relief than anything else. Furthermore, I considered the removal of the ovaries in her case as justifiable, as she certainly was not a proper subject to bear children, the effect of heredity being a well known factor in the etiology of epilepsy. After explaining the condition of things to her and her mother, they were both anxious that the operation should be done. Both ovaries and tubes were removed March 23d. Found both ovaries almost entirely destroyed by cystic degeneration, the left entirely so; tubes in fairly good condition. Since that time she has had no severe paroxysms and very few of any character. In the last seventy-two hours she has had only two, both extremely light. I shall

watch her case with great interest and confidently expect and believe she will be cured.

Case 47.—Mrs. C., aged thirty-one, primipara, Florida. Severe headache, insomnia, variable appetite, poor digestion, urine voided frequently and often with considerable pain in lower abdomen. Menstruates regularly, but with considerable pain. Upon examination found her uterus enlarged and heady, pelvic floor lacerated. April 2d curetted uterus; irrigated and packed it with iodoform gauze, and at the same time repaired laceration in the pelvic floor.

Case 48.—Mrs. L., aged thirty-one, multipara, Georgia. Suffered all the while with headache, extremely nervous, poor appetite, digestion fairly good, constipated; menstruation irregular and always attended with pain, flow continuing five or six days but rather scant. Constant backache, pain in lower part of abdomen, unable to stand or walk without pain. Uterus enlarged, with a bilateral cervical tear and laceration in pelvic floor. April 2d curetted, irrigated and packed uterus, and at the same time repaired laceration in the cervix and pelvic floor.

Case 49.—Mrs. M., aged thirty-three, multipara, Georgia. For the past several months had suffered with pain in the pelvis of a sharp lancinating character. Copious leucorrhea, very acrid, and frequently tinged with blood. She had menstruated rather irregularly and always scant, but never with much pain. Upon examination the cervix was found enlarged, eroded, and nodular. Family history shows three near relatives having had cancer. High amputation of the cervix was done April 9th, removing all diseased tissue. The mucous membrane of the cervical canal was stitched to that of the vagina, and the mucous membrane of the anterior and posterior portion of the vaginal wall were brought together on either side of the cervical canal. Before doing this, however, the uterus was thoroughly curetted and irrigated. A short Wyley's plug of

hard rubber was passed into the uterus, and the vagina packed with iodoform gauze. It might have been better and safer to have done a hysterectomy in this case, but the body of the uterus was not at all involved, and the patient begged so hard that it be left, that I complied with her wishes, with the understanding that she would submit to it if any return of the disease was noticed.

CASE 50.—Mrs. R., aged forty, multipara, Florida. For the past five or six years menstruation has been very profuse; bowels constipated; appetite poor; suffered great pain in lower abdomen, especially when standing or walking; slight laceration of the cervix; perineum badly torn, involving the sphincter; unable to control contents of bowels since birth of last child six months ago. April 9th, uterus curetted and perineorrhaphy done. This patient has a very large and tender ovary, which will doubtless, in the near future, require removal.

CASE 51.—Mrs. B., aged fifty-two, multipara, Georgia. General health fairly good, menstruation regular. Fifteen months ago noticed a hard lump about the size of a small marble in right mamma. It gradually grew until it was the size of a hen's egg, when she consulted me on the 12th instant; slightly tender to the touch, always painful when right arm is used. Had sharp and lancinating pains dart through the mamma and right side of chest. No involvement of axillary glands. No history of cancer in the family. She was prepared, as in case No. 1, and operated on the 13th instant, in a similar manner. As I write (15th instant) the drainage-tube has just been withdrawn; dressings over incision remain undisturbed. Her temperature, up to this time, has only reached 99°, and her condition in every particular is as satisfactory as I could wish.

Ether was administered to all the foregoing patients, except Nos. 11, 12, 22, 28, 34, 36 and 40, to whom chloroform was given. Chloroform was also used in the second

operation upon case No. 43. I believe if the secondary effect of ether upon the kidneys was closely watched we would find as many or more deaths traceable to it than to chloroform, both primarily and secondarily. The risk with ether is undoubtedly greater secondarily than primarily. Many deaths are caused by it that are attributed to other causes. When carefully used, and properly administered, I believe chloroform to be quite as safe, and it is much more satisfactory. The struggling of the patient when being anesthetized is done away with, and the horrible sick stomach that so frequently follows the use of ether rarely occurs with chloroform. The return to consciousness after taking chloroform is rarely accompanied with vomiting or severe nervous manifestations. I am daily more inclined to the use of chloroform, and expect, in the near future, to see the tide of professional opinion turn in its favor. Before administering it, if my patient is at all weak, I always give a hypodermic of one-thirtieth or one-twentieth of a grain of strychnia. I use altogether an Esmarch's inhaler for administering it. There is still a great diversity of opinion among many able surgeons as to the relative safety of the two anesthetics in the presence of kidney disease. Some even claim that chloroform produces more renal trouble than ether. I shall always, until experience proves to the contrary, give chloroform the preference in any diseased condition of the kidney, unless there are other potent reasons why ether should be used. In the fatal case recorded, No. 36, chloroform was used, and I believe had ether been used in this case death would have occurred within forty-eight hours. I shall never operate again in any case where albumin, in any quantity, is shown in the urine, without a thorough and quantitive test for urea, and a microscopical examination for casts, unless it be one of great emergency. If the quantity of urine is near normal, and the quantity of urea in it not notably deficient, hurried

operations may be done even if we have albumin and some casts. If, however, the quantity of urine passed is small and the amount of urea notably deficient, I would only operate for pus accumulations, or very large tumors, producing severe pressure symptoms. Where I have them under control, I like for my patients to flush the kidneys for three or four days preceding an operation with Lithia water, and I always use it for two or three weeks afterwards. It is also well, before surgical procedure, in those cases where you have the preparation of the patient, to see that the skin is clean and in active condition. We are all in the habit, I am sure, of giving too much ether and chloroform. If properly used, after the patient is thoroughly anesthetized, very little is required to keep up complete anesthesia. I find strychnia in my surgical work the most reliable of all heart tonics. Where I have the preparation of the patient, unless she is very strong, I always give one-thirtieth of a grain of strychnia every four to six hours three or four days before the operation; and if she shows evidences of shock after operation, I give it freely; watching for its physiological effects, and continue it for several days until her pulse is sufficiently strong. I consider it of much greater value as a stimulant and heart tonic than brandy. For surgical shock, I have very little faith in digitalis; it has always been disappointing to me. Case No. 31 has impressed me with the importance of always going prepared to use saline infusions, which have, I think, a most valuable place in the treatment of shock from loss of blood.

My experience with catgut as sutures or ligatures has been unsatisfactory. I now never use it, except where I do a trachelorrhaphy and perineorrhaphy at the same sitting. It is hard to sterilize, is soft, slips easily, is hard to tie with any assurance of safety, and it absorbs too quickly.

I have used many of the prepared foods, different broths, lime water and milk, peptonized milk, etc., after abdominal

operations; but if I was restricted to one article of diet for these cases, I would select buttermilk. I find many patients who in health could not use it at all, after a laparotomy, take it with the greatest relish, and it is extremely rare that I find one with whom it disagrees.

As a hypnotic, I have found nothing so satisfactory as ten to fifteen grains of trional, repeated in an hour if sleep is not produced. The use of it has not been followed by any unpleasant secondary symptoms.

As a purgative, after an abdominal operation, I am more in the habit of using epsom salts than any other remedy. Experience proves it to be the most satisfactory to me of all laxatives. I usually give it in three-drachm doses, repeating every three hours until the bowels move. I have used it hypodermically in two cases only: one satisfactorily, in the other no effect was noticed.

While I have always deprecated the use of opium, especially in abdominal work, and have used it with great care and caution, an increasing experience convinces me that those cases where it is not given at all do much better, and their convalescence is more satisfactory in every respect. While the pain after abdominal sections is frequently severe, it rarely continues but a short while. Where the pain is so intense and threatens to exhaust the patient from continued suffering, I think it advisable to use it in great moderation with great care. I think many of the cases of bowel obstruction, whether due to paresis, lymph bands, or adhesions, are traceable to the use of opium. I am convinced that the adhesions in case No. 43, where the abdomen was reopened, were due to the paralyzed or quiescent condition of the bowels, so rendered by the two doses of morphine given after the operation. While all peristalsis was arrested and the bowel was lying quietly against the ovarian pedicle, the lymph was rapidly pouring out and the constriction produced. Had the peristalsis kept up no adhesion would

have occurred. Just here let me enter a plea for the early reopening of the abdomen in all cases of diagnosed or strongly suspected post-operative obstruction. Do not let your patient die without giving her a chance for her life.

In my laparotomy cases, where it has been necessary to elevate the uterus for retroflexion or retroversion, I have done so by shortening the round ligaments, by including them in the ligatures that encircle the ovarian pedicle. In the few cases in which I have done this, the uterus has remained well forward, while it is still allowed free movement. It is not fixed against the bladder, causing great irritability of that organ, that ventro-fixation sometimes does.

There are many other points I would like to discuss, but the length of this paper forbids. I herewith submit for your inspection a few specimens that I have removed from women who have been the victims of one to three years of the so-called conservative treatment with iodine, iodized phenol, nitrate of silver, nitric acid, carbolic acid, and other similar caustics.

DISCUSSION ON DR. HOLMES'S PAPER.

Dr. J. G. Hopkins of Thomasville: I would like to ask Dr. Holmes one question. I lost track of the details in relation to one interesting case which he described, and that is the case of tubal pregnancy. What time elapsed between the rupture and the operation?

Dr. Holmes: The rupture occurred early Monday afternoon, and the patient was operated upon on Friday morning about nine o'clock.

Dr. Hopkins: How long had pregnancy existed?

Dr. Holmes: About eleven weeks.

Dr. Willis P. Westmoreland of Atlanta: There is one point in the doctor's paper in regard to the use of ether and chloroform that I desire to discuss very briefly. I do not

know what the experience of the rest of the gentlemen is in regard to them, but there is no question in my mind about the safety of ether over chloroform, if it is properly given, or the safety of ether over the mixtures that combine ether, alcohol, and chloroform. According to reliable statistics, we have on an average one death in every 2,500 cases where chloroform is administered, and only one death from ether in about 20,000 cases. I shall continue to use ether. I should feel if I gave chloroform to a patient and he died, as if I had forfeited about 17,000 chances against his death. This being such a well-known fact, I believe one of the States has made it manslaughter if a patient dies from chloroform.

There is another point in the doctor's paper concerning appendicitis or abscesses and the use of peroxide of hydrogen that interested me very much. I suppose the doctor meant only in cases of circumscribed suppuration.

Dr. Holmes: Yes, where the abscess is walled off.

Dr. Westmoreland: In a walled off abscess in appendicitis we have no idea of the thickness of the wall. Cases have occurred with a sufficient degree of frequency of perforation following the use of peroxide of hydrogen that I am a little chary in using it. There is no question but that proper drainage of the abscess in appendicitis will give us good results, and I am satisfied in a number of cases that the patient will get well more rapidly through the non-use of peroxide than he will with it. With a large incision and proper drainage, I think we get as good results as with the use of peroxide of hydrogen, and I certainly prefer it.

OBSTETRICS AS PRACTICED IN THE MOUNTAINS OF NORTH GEORGIA.

BY T. M. GREENWOOD, M.D., MINERAL BLUFF.

When we think of the great importance of this, one of the fine arts of our profession, and look at the vast amount of literature (the product of the greatest talent of the world) that has been contributed, from time to time, on this subject, it is no small wonder that any people would look upon it as a mere commonplace thing and treat it with such utter indifference—dealing with it in so trivial a manner. Perhaps more than half, if not two-thirds of the obstetrical work in this section of country is done by midwives, called here we suppose, as they are called in all parts of the country, by a multiplicity of names, such as "night-riders," "grannies," "minute women," "sheriffs," etc., etc.

Coming, as they usually do, from the more humble walks of life, it is seldom that we find one of them who can even read, knowing nothing of the responsibility resting upon them, and caring less, so far as the remote results are concerned. They have as little knowledge of the "germ theory" as a Hindoo has of theology, and have a total disregard for anything like ordinary cleanliness. Yet they are regarded by the illiterate class, from which they usually come, as the great panacea for all ills, but regarded by the more enlightened element as a sort of "make-shift."

Their armamentarium consists of almost every species of herbs ("yarbs") indigenous to this latitude. With the exception, perhaps, of those known to possess some medicinal

virtue, *every variety* is looked upon as possessing some virtue peculiar from the others, and *must be gathered* in a *certain* place, on *special* days of the week, and if barks are gathered they are "skinned" up or down, with *special* reference to the effect these persons desire to produce by their use. In short, all their doings are with the same superstition as that of the ancients. They will never yield a point, and when once in charge of a case, will rarely admit that "anything is wrong," and are highly insulted if the doctor is sent for. Notwithstanding all this, their immediate results are not altogether unsatisfactory. This can be better illustrated by the following: I was called to see a lady some ten miles away, who had been in labor (as they informed me) for two days and nights. I found her *completely* exhausted in the hands of a midwife who assured me with emphasis, that "the woman is all right, and only lacks time—nothing wrong." Among the many contrivances she had brought to bear, the following was the most striking: The child's head, which was presenting natural and a roomy pelvis, had failed to enter the "bones," she said. So taking a sheet and folding it lengthwise, the midwife passed one end under the patient, bringing it up and passing it over the opposite side, decussating the ends just above the child, giving each end of the sheet to an assistant whose duty it was to draw forcibly the loop thus formed, when the pains came on, thus squeezing the child out. Well it had entered the "bones"—child, uterus, and all, but had stopped in time, as had the pains, to prevent any serious harm being done.

Yet the results of these "grannies" in general in this country will compare favorably with those of classic city doctors within my knowledge, and many of the large establishments, maternity hospitals, etc., can but envy their results, both as to child and mother. But the remote results are appalling. Confining as they do, "on the lap,"

digging and grabbling after the child, as does the canine for his prey when in the ground (like a dog in a "sink-hole," by Jacks!), making them "lie flat" in bed after confinement, without turning over, or their clothes being changed for the favorite "nine days"; or, otherwise having them up in a day or so and going about their usual duties before anything of the natural condition has returned, sowing subinvolution, cellulitis, pelvic abscess, lacerated perineum, etc., through the list, broadcast in our land, filling thousands of homes with sorrow, pain, and grief for the suffering or the loss of a mother. Moreover (should I speak it softly?), this forms the greater part of the work of the practicing physician, and enables our specialists to build large infirmaries and crowd them with patients and fill their pockets with gold. But I have said that their immediate results are not so bad. Now let us look into some of the reasons why this is true:

Our women, as mothers, contrary to the recent teaching of a prominent laparotomist of the South, that healthy mothers are gradually "playing out" (his observation being largely confined to the cities), are nothing less than perfection in point of physical development. Their habits before puberty are all that nature requires—plenty of pure fresh air, bodily exertion, as necessitated by their daily avocations—clothing loose and suspended from the shoulders, diet plain and simple, but nutritious and plentiful. In girlhood they roam the fields and forests as boys, vying with them in strength and surpassing them in many instances in the athletic sports; when suddenly puberty arrives, a change comes to them almost imperceptibly, and they are women, and very soon afterwards become mothers.

Out of the one hundred nullipara which I have attended in labor and noted the age, seventy-five of them were eighteen years of age and under, the youngest being thirteen years and two months. I have heard of a case a little past eleven.

They were all normal labors, and made good recoveries—the younger, the better, it seems. In view of these facts, I cannot forbear to say that the writer referred to is incorrect as regards this section of country. Let it be ever so true in his field of observation, granting this, we must look somewhere for the cause, and I would suggest that colleges, corsets, and cork-heel shoes are the most potent evils with which the present generation of mothers is cursed.

Let us now come more closely to the subject, and review the practice of the profession, which, in many respects, is similar to that just gone over.

As a general rule, we are not notified that we will be called to wait upon a certain case and cannot look into the condition of her health, or make any preliminary preparation. Generally called hurriedly to them, and perhaps ten miles away; therefore, when we arrive, the first stage is usually far advanced, if not completed. If this is not true, the woman is "knocking about" the house and attending to some light duties, which she insists on continuing for some time—not a bad idea, for dilatation will set in much earlier and progress much more rapidly when a woman is on her feet and changing her position than otherwise. Finally, when it is deemed advisable to make an examination—which we are never in a hurry to do—the woman is asked to lie down on the lounge, or more generally the bed, as the former is not usually found in this country. Our hands are cleansed with soap and water—soap being the only thing needed as a lubricant—and then a careful examination is made, never neglecting to note the condition of the bowels. If sufficient progress has been made to enable us to map fully the position of the child, and the pelvis is normal, we rarely make anything more than a casual examination till the membranes rupture and the water escapes; then we always make a thorough examination. But the

parts may fully dilate and yet the membranes remain intact. This brings us to the point of interest to me, which, henceforward, is based on my individual experience and observation of more than seven years, with 590 cases in my own hands, or in consultation, if such it can be called, with midwives.

What course shall we pursue? Shall we turn and deliver by the feet? Shall we rupture the membranes, chloroform the patient, and use forceps? Or shall we give ergot and rupture membrane at the same time—either, both, or neither?

The first (that is turning) can be, and is, safely done, yet it is worse than useless in a normal head presentation. I would prefer it, in fact, to the use of forceps, and it is their use which, in our opinion, makes the chief point of difference in the practice here and in other sections of the country.

We were taught by our professor of materia medica and therapeutics, in given cases to give ergot after the membranes had been ruptured. On the other hand, our obstetrician condemned this practice by saying that where ergot was indicated the forceps should be used. We have tried the former with some good results, but have abandoned it. We have scrupulously avoided the latter. We have frequently been tempted to use them, but have avoided it by leaving them at home, and have regretted it in only one case where, owing to the extreme and long-continued pressure, caused, in my opinion, by the use of ergot before the child's head had time to fully mould itself to fit the pelvis, the child was still-born and could not be resuscitated. Had the forceps been used or the ergot omitted in this case, I believe the child could have been saved. Our plan is to wait —wait for the membranes to rupture, a reasonable time—and a reasonable time in a case of labor is a long time—and if the second stage sets in and they do not still rupture, then

we rupture them by a very small puncture, and THEN WAIT. Should the parts become relaxed, the membranes remain intact and second stage, or bearing down pains, fail to set in, we invariably rupture them, and have never regretted doing so. In our opinion, the great trouble with most accoucheurs is a lack of patience. In a leading literary journal, some time ago, appeared an article under the heading, "The Lost Arts," in which the writer gave patience as one of them, and dwelt at length upon the subject, showing in many instances where the ancients surpassed us in this respect, dealing more particularly with the arts and artisans. Going, however, into the sciences and literature, he showed how our boys attempt to accomplish in from one to three years an amount equal to a lifetime with them. Our chief plan, then, is to WAIT; but be *sure* that there is no abnormal condition. We are loath to believe that our race has deteriorated; let other sections speak for themselves. We see no reason why a physiological act (as this must be one) should be so often converted into a pathological one. But forty-eight or fifty-two hours are more than the average doctor of medicine cares to devote to one case when his fee (as is customary in these mountains) is only $5, besides all the discomforts of the average home of the ruddy mountaineer.

Without any desire to reflect upon the practice of our fraternal friends, we might add, before dismissing this point, that the forceps are not entire strangers in this country. We know of two young men who practice in adjoining neighborhoods, both graduates of the same school that the writer has the honor to claim as his alma mater, who for the past two years have had fifteen forceps cases which were very well handled and with a mortality greater than the whole seven years which we have passed.

We do not care to go into the various methods that are practiced to increase the pains; nothing would be gained thereby. Granting that the labor will terminate normally

(that is, without instruments) and with perfect safety to both mother and child, this brings us to the third stage; but before we go into it we will give briefly the manner in which the child is usually handled by the midwives. The cord is immediately cut a little further from the umbilicus, leaving more of the cord than is done by the profession. It is not uncommon to find a cord left four, five, or even six inches in length. A large soft cloth is then well scorched, smeared with lard, a hole burnt in the center, and the cord drawn through it, when it is folded well about and left on top. But before this is done the child is thoroughly scrubbed with soap and water, not uncommonly lye or soft soap. It is then dressed and invariably given a dose of castor-oil, sometimes a piece of fat meat to suck, and then put to bed with its mother, seldom being put to the breast until the milk appears. In our opinion this part of the practice should be most strongly condemned by the profession, and the sooner it is entirely abandoned the better for the child. We will not stop to assign any of the many reasons to support this assertion.

The mother is put to bed and allowed to remain there half-starved for the favorite nine days, when she is taken out, and her clothing changed for an out-and-out suit which has been well dried and smoked over burning bran or meal, when, if all is well, she goes about her usual household duties.

But this does not always come about so easily. A form of septic fever may and frequently does set up, the result, in part, of the manner of handling as above referred to, and in part to the way the third stage is conducted. The midwife does not seem to have any special plan of proceeding in this, and rarely succeeds in fine, often fails entirely. They have a great horror for the thought of introducing the hand, but "will do almost anything on the outside, but *never* go in."

Our plan, after the child has been delivered, is to resuscitate it before the cord is divided, if easily done. We cut the cord an inch or so long, and tie it with soft cotton twist. We have tried several plans of fixing up, all of which have been more or less successful. We now cut or burn a hole through a soft piece of linen, preferably old, and *always clean*, draw the cord through, folding it neatly around, and laying it up and a little to the left. We use no ointments, no antiseptics, and have had no serious trouble since using this method. We do not wait as long as is usually directed in the text-books to complete the third stage of labor and have always found waiting to add to the trouble if not to the danger. We proceed at once, after having attended to the child (handing it to the nurse), after the method of Crede; using more force with the hand on the abdomen, the womb is more firmly grasped than formerly. With the womb firmly between the thumb and fingers, there is little or no danger in drawing on the cord with some force, if we only cease to draw at the proper time. Eversion by this method has never occurred in our hands, and may be more theoretical than otherwise. When the contractions set up and the placenta is *expelled*, the membranes may or may not come entirely away, a small amount of which, if left in the uterus, can do more mischief than anything with which we are familiar, and is the prime cause of a large per cent. of the bad recoveries in this country. To avoid this we draw the tumor very slowly from the vagina, through the vulva, finishing by so gently withdrawing what follows after the main portion, that not a single shred is allowed to remain. This properly done, we never introduce the hand, or even the finger, or use any wash. Should there be any doubt as to whether or not any laceration of the perineum has taken place, we prefer to give it an ocular inspection. The usual rules of thorough cleanliness are enforced, the woman made as com-

fortable as circumstances will allow and given the following instructions: "Put your child to the breast as soon as you are sufficiently rested. Do not allow it to have anything—not even tea—unless it becomes sick, then call the doctor to see it. If there is no action of your bowels in twenty-four hours, take a teaspoonful of 'salts' dissolved in hot water and repeat every hour or so till an action is obtained. (We have abandoned giving oil.) Eat whatever suits you, omitting such vegetables as are hard to digest or are likely to colic you or your baby. After two or three days, or after the milk has appeared in your breast, if you have any deeply seated soreness situated in the lower part of the abdomen, a dull, heavy headache, with sweating or any bad odor about the bed, let me know it, provided these symptoms do not pass off after the free use of the 'salts.' (Unless this 'takes place' we never see them as a patient in this case any more.) Remain in bed at least ten days."

Out of 590 cases we have had most all of the presentations. Of breech we have had four, and one death caused by pressure on the cord. We have seen the head presenting in almost every imaginable way, but have always succeeded in getting them corrected into one of the more favorable presentations, and have delivered them. Only three of shoulder and transverse have occurred. These were all changed to head presentations without introducing the hand—one excepted, in which case we introduced the hand and brought down the feet, the so-called "podalic version." Our footlings proper have been but two. Puerperal eclampsia, judging from our cases, are of rare occurrence in this country. Two cases are all that have fully developed. In several cases we have had symptoms pointing to this much-dreaded trouble, which have subsided by the timely use of the "Griggs" treatment, either with or without chloral—*i. e.* veratrum and morphine combined and

given hypodermically. Only one case failed, so far, to yield to this, as to necessitate active interference. She was a woman twenty-eight years of age, the mother of one child, and mentally was very weak. Her husband had left her with no promise of return. It was about the close of the eighth month of gestation that I was called to see her, on account of a severe headache early in the morning, feet swollen, etc., which led me to suspect eclampsia. Chloral was given and ordered kept up, with instruction to let me know in the afternoon how she was. About one P. M. I was sent for in great haste. I found her in convulsions. After trying the veratrum and morphia to no avail, I put her under chloroform and sent for assistance. After the arrival of the assistant we continued the chloroform and proceeded to dilate the os, which we found firmly contracted, and no pains. It was dilated with the finger until the hand could be introduced, the child's feet grasped and brought down, and the labor completed without the use of instruments. The child had been dead for several days. The vagina was washed out with a bichloride solution—only boiled water being thrown into the uterus, and a very small quantity of it at that. The chloroform was withheld and the woman allowed to come out, when the convulsions did not return. She made a good recovery, with no rise of temperature, and was up in two weeks.

Asepsis and antisepsis have been extensively practiced in other parts of the world, but neither had been used to any extent in this country when we began the present record—the former but little and the latter none. It had never been heard of and dates with us. Quite well do we remember the first time we were called to see a case of puerperal fever, with one of our best practitioners, who, when we suggested that a vaginal douche of a weak solution of the bichloride of mercury should be given, was almost dumfounded, and exclaimed, "That is poison!"

The mortality in these cases was alarming. We have used them extensively from the beginning, together with "epsom salts," which we began a little later. Some six years since the douche, the salts, with opium occasionally, when indicated, and calomel to certain cases, constituted the basis of our constitutional treatment. Externally we apply turpentine stupes, the same as in typhoid fever, very hot, and renewed sufficiently often to keep them so. Later, quinine, iron, and strychnine, with stimulants when necessary. This may not differ in any respect from the general practice in other countries, yet the mortality has been *nil* in our hands, and only one death in consultation. Surely our women do not have such grave attacks as other women in other sections, or they can stand more of *this*, as they have less trouble in parturition. Certain it is there is a differ ence. Out of the whole number attended five children have been lost, as accounted for in the foregoing, except one which was a monster and lived only a few moments. Development had been arrested in this case by the *liquor amnii* having escaped during gestation. What more could we add as proof of what has been written and in justification to ourselves of the methods practiced, though they be ever so poorly set forth in this paper, than to tell you that we have not lost a single mother. Surely the methods are ideal, or this is the most God-favored land in the world in which to perpetuate the race.

This is a day of scientific research. Men are making rapid strides in every department of science. Ours is the one above all else needful to perpetuate a great nation. There is no such thing as stop with us. Therefore we must go forward; we cannot go backward.

DISCUSSION ON DR. GREENWOOD'S PAPER.

Dr. J. B. S. Holmes of Atlanta: I would like to ask Dr. Greenwood about his percentage of mortality, or how many still-born children he had?

Dr. Greenwood: One.

Dr. Holmes: I want to congratulate the doctor on his results in saving children and the non-use of ergot. I think ergot has done more damage to lying-in women than any other one agent—perhaps all other agents combined. It is responsible for more lacerated cervixes and their subsequent effects than any one remedy. I differ from him, however, in regard to the use of forceps. I would no more think of going to see an obstetrical case without my forceps than I would think of going without my shirt. I think they are most conservative to the mother and life-saving to the child, when properly used. I also congratulate the doctor upon another point, and that is the ocular inspection of the perineum after delivery. I think it is the duty of every obstetrician to be careful to inspect the parts, and if he detects a laceration and fails to repair it, it is criminal.

Dr. V. H. Taliaferro of Atlanta: I congratulate the doctor on his percentage of mortality in his practice in the mountains of Georgia. It was very hard, while the doctor was reading his paper to separate his own ideas from those of the midwives. As everybody knows, in a great majority of obstetrical cases, the young practitioners, especially, go to them expecting normal delivery; but we all know in a certain per cent. of such cases we must have some abnormal condition to deal with, and by waiting as long as the doctor says he waits in order to make the diagnosis clear, we know it is then too late oftentimes to select an operation. By making a diagnosis early of presentation when we have abnormal conditions to deal with, we have a great many operations that we can do whereby we can save those cases that the doctor says he sometimes loses.

There are a great many points in the paper that are extremely interesting to us, because we all know in city practice that our women, when in labor, are subjected to a cer-

tain number of dangers which country women seem to be perfectly free from. The anatomical perfection which is so easily obtained in the country by these women, through outdoor exercise, makes them peculuiarly free from all of the dangers that we have to contend with in city practice.

I have seen two cases which will perhaps be of interest in showing the ease with which women sometimes are confined. In passing a hotel in Atlanta, I saw a negro woman, finely developed, grunting on the sidewalk, with a bundle of clothes under her arm and a crowd of inquisitive people surrounding her. I asked what was the matter, and she said she thought she was going to have a baby. In fifteen minutes she had given birth to a large child. She picked up the baby, wrapped it up in the bundle of clothes, and went on her way.

Another woman, a perfect specimen physically, gave birth to a child in about twenty minutes after she was in labor. She had only three or four strong labor pains. After the birth of the child she got out of bed to get something that was needed in the preparation of the child.

I again congratulate the doctor on his successful results, and hope he will have them in the future in his practice in the mountains of North Georgia.

Dr. Wm. A. Love of Atlanta: I, too, congratulate the doctor on his success, and I speak from an extensive practice among those people who, in the rural districts or mountains of Georgia, are blessed with good health by following the laws of nature, taking considerable outdoor exercise, etc., and at the proper age they go forth and fulfill the divine command, "be fruitful, multiply, and replenish the earth," and they are eminently successful in that business. When labor takes place they give an account of their stewardship.

There is one point in the doctor's paper that attracted

my attention, and to which I desire to call the attention of the Association, and it was with reference to the absolute removal of the membranes. Old Dr. Hodge of the University of Pennsylvania was my tutor, and he taught me always in the removal of the placenta from the vagina to do this: that just as soon as the placenta had passed the vulva to commence with a succession of regular turns of it and make the remaining portions of the membrane that remained in the cavity of the uterus in the form of a twisted rope, and by removing every part of the placenta from the cavity of the uterus we avoid septic infection.

Just one word about the use of ergot. Dr. Holmes has made a very apt allusion to the use of this drug. The action of ergot is to produce a chronic spasm. It commences with pain, then contraction, and the contraction continues like the contraction we find in cases of lockjaw. It is a continuous thing, and something must give way. The child must be expelled, the uterus must rupture, or the pressure brought to bear upon the child must interfere with the circulation *in utero* and produce death, and, therefore, I am, like the doctor, opposed to the administration of this drug, unless it be subsequently for the purpose of producing tonic contraction of the uterus to expel the coagulated blood from the uterine sinuses.

Dr. K. P. Moore of Macon: I have a case to report which is directly in line with the doctor's paper. It was a very unusual and unique one to me, having occurred about fifteen months ago in my practice. A lady (about eight and a half months advanced in gestation) was startled by a gush of water, and I was sent for, about ten hours before she was delivered. Labor went on without any unusual symptom; but after delivery I waited the usual length of time, then introduced my hand, and found the placenta firmly adherent and filled with a calcareous deposit.

Around the margin of the placenta was a thick rim of this calcareous deposit, which I had some difficulty in getting loose at first, but after getting it started by introducing my fingers behind it, it was very easy to deliver it. The most unique thing was this, that, so far as I could discover, there was no amniotic sac at all. The placenta came away absolutely clean. When I delivered it, I carefully examined it to see whether there were any remains where the placenta was intact. Finding no amniotic sac, I felt curious to know what had become of it, and thought possibly it might have remained inside the uterus. I reintroduced my hand, and found nothing. The uterus was clean. I examined the débris that had passed out, and could not find it in that. There were a few shreds which seemed to have covered over the internal os so as to prevent the escape of water. The question is, what became of the amniotic sac? There must have been one originally. I was very curious about this, and for two or three days revolved the question in my mind. Thinking it might still have escaped me, I examined the patient again two days subsequently, finding the uterus and vagina clean. I do not know what became of it. I wrote private letters through my son, who is a medical student in New York, to Lusk and others, and they could not account for it in any way. I had the pleasure of reporting the case to the Macon Medical Society, after which it was freely discussed, and the most plausible theory of the loss of the amniotic sac was advanced by Dr. Gilmer, namely: that there was such a degree of endometritis during gestation, and possibly inflammation of the amniotic sac, that adhesion might have occurred between the amniotic sac and the uterine wall, and it had become so adherent that it was lost in that way. Also, there may have been exfoliation subsequently during the period of recovery. The patient went through the usual course of involution, which lasted the usual length of time. She was feeble.

The baby was necessarily frail and delicate, as most of these children are whose placenta has a good deal of this calcareous deposit, which interferes with the proper nutrition and growth of the child. The child was born viable, lived, and is now a fine child.

The case is an unusual one from the fact that I have been unable to find any literature at my command bearing upon this subject, and the obstetricians with whom I have conversed have never known of such a case as this.

Dr. Love: I would like to ask if the patient had had rheumatism?

Dr. Moore: Yes. The woman was confined to her bed with rheumatism about six months some years previous to this pregnancy. She had, however, borne one child between the attack of rheumatism and the present child, and had had no return of the rheumatism since that attack, several years previously.

Dr. Greenwood (closing the discussion): I am very much pleased with the opinions that have been expressed on my paper. As to the time of examination, I make it as soon as I deem it advisable, and I mean by that as soon as I know the women are in labor. Dr. Taliaferro must have misunderstood me in regard to this point. As for the difference between my own work and that of the midwives, it is probably due to the manner in which the paper was read, or the doctor may have failed to *catch* what I said.

With reference to the mortality of children, there have been five deaths altogether: one from the escape of the amniotic fluid; another, a breech presentation, from pressure on the cord; one from the use of ergot, and another where, if I had had my forceps, I would have saved the child. But the point I wish to emphasize most is the fact of the wonderful perfection in the physical development of country women; and the other point is the lack of patience.

I have no doubt in my mind that a great many practitioners rush these things too rapidly.

Another point which deserves special attention is an absolute aseptic condition of the parts, without any special care being taken whatever. We scarcely have any septic results from wounds or anything else. To make this point more forcible, I will say that not very long ago I had a wound to contend with that was seventeen inches in length, made with a knife, which I closed with continuous catgut sutures, and never saw it until ten days afterward, when it was firmly united without the formation of abscess. Of course, I used antiseptics in washing out the wound.

MIND AND BODY.

BY CHARLES S. WEBB, M.D., ATLANTA.

What is mind and what is body? What is the mysterious, the wonderful link that binds them together? How can they be separated? What affects one will affect the other. One of the greatest men this country has ever produced said, after passing through a trying ordeal, that he felt as if there was nothing in him below his chin. He had the experience of a good many of all professions, and especially of the medical profession. Have you not often felt in the trials and struggles of your professional life, that there was nothing left either below or above the chin?

Bodily fatigue and mental anxiety have worked together until we feel almost in a condition of collapse. But how about this mysterious relationship between mind and body? You know that you have felt it, then how about the patient? He will watch you as you enter the sick room but you must not let him know that you watch *him*. You may warm yourself at the fire, or talk pleasantly with members of the family, never forgetting the patient and always keeping your eyes and ears open to find out what you could never do by direct examination. For instance, in pneumonia you might listen for the cough, or the frequency of the respiration, or take a surreptitious glance at the face of the patient before you examine him directly. If you walk up to him at once and ask him to cough, you will get something strained and unnatural. Your very presence will excite him, especially if you have a sad countenance and ominous look.

Shakespeare expressed a great truth when he said: "For 'tis the mind that makes the body rich."

I know a physician, highly educated and cultivated, who lived in the county adjoining the one in which I was born, who was treating a case in which he saw that it was necessary to quiet the nervous disturbance and calm the mental emotions of the patient. But the neighbors would insist upon coming in, and there was one good old lady who continued to talk in an excited manner. The doctor could not manage her, and when his patience was exhausted he shook his finger at her and said: "Madam, I would like to see you have the lockjaw for about fifteen minutes." She replied immediately: "Well, sir, if I should ever have it I wouldn't send for you." I had a case once that illustrates the same idea. A young woman, extremely nervous, with conditions of melancholia and great excitement alternating with each other. I called in a physician for consultation, but the neighbors, finding the door not locked, came in unannounced and stood around the bed with anxious looks. I wrote a card, "No one must come into this room except those immediately in charge of the sick person." My consulting friend said: "If you put that card on the door you will have all of these people mad with you." To which I replied, "I can't help that, my first duty is to the patient." I put the card on the door and thus effectually stopped all further intrusion. It should never be forgotten in our treatment of disease that we have to deal not with the body alone, but with the body inhabited by a mind which is connected with every particle of that body by countless nervous filaments, acting through them upon it and affecting to a greater or less degree all of its diseased conditions. The influence of causes acting through the mind is often concealed from the most acute observer, and even when the physician is satisfied that the causes are in the mind, it is often difficult to make his diagnosis with

any degree of precision. For instance, in aphasia, either of the amnesic or atactic kind, we think at once of the anterior portion of the third left frontal convolution. But even if we have an autopsy we cannot always find any visible evidence of changes there, for these changes are sometimes so subtle and silent as to leave no trace behind. These cases sometimes suddenly develop a tendency to the habit of swearing. I do not mean to say that all people who are given to profanity are the victims of bodily changes, but it serves to show that there are many people who "need the M. D. more than the D. D." What would be the use of giving such people lectures on morality? What eloquence could "minister to a mind diseased"? The sweetest singer could never sing a hungry baby to sleep, unless it should come at last as the last sleep of exhaustion.

Let us not think that when the body is sick, it is only sickness of the body and that the mind has nothing to do with it. In all cases of actual mental derangement which may occur in connection with any disease of the body, we must agree that both are affected, no matter which began the attack. There cannot be any sickness of the body that does not produce some effect upon the mind and which is not influenced either for good or for ill through mental impressions. This fact should be kept constantly in the mind of the physician. Everything that he says and does in the sick room is to be regarded as really a medicine, producing often as good effects as any drugs he may administer, and certainly greatly helping their influence for good.

To illustrate this idea of mental impressions I will give a few cases which have not been published.

CASE 1.—This case was related to me by the physician in charge. He says: "I was called recently to see a man who was suffering torture from what seemed to be myalgia

and sciatica. He was a poor man and a stranger, and having no place to sleep had been compelled to remain out of doors all night in the bitter cold weather. After giving him morphia and other drugs he soon rallied but the pain was still severe. Finding it necessary to continue the opiates in various forms for several days, I afterwards thought it would be wise to discontinue their use. I determined, therefore, to practice a little deception and see what effect the mental impression would have on his body trouble. Instead of giving him the usual hypodermic injection of morphia, as I been doing for a week, I filled the syringe with water leaving out the morphia and gave it to him at the same regular intervals. The effect was remarkable. The agonizing pain was relieved and the nervous system seemed to respond as readily as before. The patient believed he was taking morphia. After a few days he was able to get out of bed and was entirely relieved."

CASE 2.—Some years since a young physician living in Virginia met a negro man on the street, and wishing to have a little fun at his expense, said: "Joe, what is the matter with you, you seem to be very sick?" "Nothing the matter with me, I never felt better in my life." "But I am a doctor and I know that you are sick, and if you don't look out you will be dead in less than twenty-four hours." The negro being superstitious went home, was taken suddenly ill, and died the following day. (I do not approve such methods of experimentation, but this case serves to show that either the doctor was a prophet, or the powerful influence of mental impression.)

CASE 3.—Mrs. F. remained in her room two years and refused to come down stairs, although apparently in good health. Finally she came out and is living now, engaged in her household duties, well and happy.

CASE 4.—Mrs G., a case similar to the above, remained in her room three years and refused to come out. She is

now out and well. (No treatment in either case except the judicious use of mental impression.)

CASE 5.—John W. (colored) had been using crutches for along time, being crippled from an attack of rheumatism. A circus company came to town and John, with the curiosity that belongs to his race on such occasions, stayed near the tent as much as possible. He provoked the wrath of one of the circus men who proceeded to attack him with a club, but John was too fast for him. He dropped his crutches and ran faster than the other man. I knew him well for several years after that and he used no crutches

CASE 6.—Rev. Mr. D., old and somewhat crippled from rheumatism, went from church to spend the night with a friend. That night the house caught on fire, and in the hurry and excitement they forgot the old man who had to be assisted up the stairway when he went to bed. But when they finally remembered him, seeing the house would certainly burn down, they found that he had come down alone and had walked several hundred yards to a neighbor's, and was safe in bed.

CASE 7.—Mr. M., a carpenter, a kind and loving husband and father, and a genial friend to all who knew him. Gradually he begun to be disagreeable, and finally cruel in his family, so as to render it necessary for the authorities to take him to an asylum. The physician in charge gave him a thorough examination, and finally asked him if he had ever received a blow on the head. He said he had been struck on the head with a hammer. The physician felt for and found the place and removed the bone with the trephine. The man was soon returned to his family, the same kind and loving husband and father as in former days.

If this man, while in the condition mentioned above, had committed some crime he might have been sent to prison

or, perhaps, executed. But was he responsible? We should be very careful, therefore, how we, as medical witnesses, deal with a man on trial for his life or liberty. In this thought there is a lesson of wide application.

When we consider what has already been said in this paper we can readily see that the physician has many opportunities for using the patient's mind for the cure of his body. He can do this by his own manner and expression, exciting hope and a train of agreeable associations in the mind of the patient, causing him to forget himself and his disease. Change of scene is always beneficial, or if the patient is not able to leave his bed change the furniture in the room, and especially turn his bed around so that he cannot see the clock. How monotonous for a sick man to lie prostrate day after day and watch the clock and count the hours. I have often recommended these changes and found great advantage. Any diversion of the mind will have a beneficial effect. I have read the case of a woman who was cured of melancholia as soon as her husband had the misfortune to have his thigh broken. In her anxiety for him she forgot herself. In conclusion, let me say that the educated and conscientious physician is the greatest benefactor of the human race.

THE CAUSE AND TREATMENT OF CORNEAL ULCERS.

BY S. LATIMER PHILLIPS, M.D., SAVANNAH.

The cornea, from its prominent situation as the fore part of the eyeball, naturally becomes the frequent seat of accident and disease. A goodly portion of these takes some form of ulceration, and it behooves us to be ready to recognize the cause, to remove it, as far as it is within our power so to do, and to institute a treatment that will arrest the progress of the disease and bring it to as speedy a termination as possible.

In a paper of the scope of this we cannot go too much into detail, so I shall only glance in a rapid manner at some of the more important causes, which I shall divide into constitutional and local.

Constitutional Causes.—Oftentimes we see this condition of corneal ulceration developing in people pulled down by some chronic disease, such as phthisis, malarial fever, etc. I know a case here of a man far gone in consumption who, by careful attention to his diet, etc., is able to get about and attend to his business; but as soon as he becomes run down from indigestion or overwork the left cornea begins to ulcerate. He has had several attacks of this now, and, as a sequence to them, a large central leucoma with but little vision. Ulcers of the cornea are much more frequent in the adult and aged than in children and youth, if we except that very common affection of childhood—phlyctenular keratitis. Here there appears to be a peculiar dyscrasia, or scrofulous condition, with enlarged glands,

eczema of lids, catarrhal conjunctivitis, and tendency to ulceration at angles of lids, nose, etc. Of course, where there is lowered vitality, the cornea, like other portions of the body, becomes weakened, and the slightest irritation will serve as a starting point of inflammation, which may progress to complete destruction of the part unless the system is put in a condition to resist the disease. We find in old people, sometimes, ulceration of the cornea slowly progressing with no other appreciable cause than lowered vitality. I have seen, in the old, ulceration of the cornea after undue straining of the eyes from reading, writing, sewing, etc.

Local Causes.—Anything acting as an irritant to the cornea will serve as a beginning for the ulcer. Foreign bodies of any kind resting on the corneal surface, as pieces of wood, metal, etc., produce abrasions through which the germs gain access to the underlying tissues and set up suppurative processes. Some of the severest cases of corneal suppuration I have met with have been those where the cornea was pierced by beards of grain—with sharp serrated edges. These make a jagged, irregular wound, in which the germs easily obtain a resting place and multiply.

I have known stubborn, persistent ulcers to easily get well after the removal of an ingrowing lash. This, by a constant scratching, has kept up the disease. Granulation of the lid, too, is not an uncommon cause of corneal ulcer. In a very serious form of this disease we are apt to see more or less corneal complication. A diseased condition of the nose may be a cause, also, the germs of the disease passing up through the lachrymal canal. I remember, several years ago, the case of a man with ozena, the result of syphilis, with destruction of cartilage and caries of the bones of the nose, who was under my care. He had a central corneal ulcer, sequal to a burn by a small piece of hot iron, and, notwithstanding the most vigorous treatment, the

eye was totally destroyed. Of course acute and chronic catarrh of the conjunctiva play a part in the causation of corneal ulcers. In those severe forms of purulent conjunctivitis we meet with sometimes, where there is so much swelling of the conjunctiva that the corneal nourishment is interfered with, the ulceration varies from a very small point to the suppuration of the whole cornea and its consequent complete destruction.

Treatment.—This I will divide into medical and surgical, and the adoption of one or the other depends upon the state of the ulcer when we find it, and oftentimes we have to employ both. Of course where the patient is in a reduced or debilitated condition tonics must be freely prescribed—the hypophosphites, iron, strychnia, etc. In those scrofulous conditions so often seen in children I prefer the iodides in some form. I usually employ the syrup ferri iodide, and with much satisfaction, together with strict rules as to diet. Cod-liver oil is called for at times and, in old people with delicate stomachs, the Vin Marianni appears to be most helpful.

The local medical treatment consists mostly of sedatives in acute ulcers, and stimulants in the indolent kinds. Atropia is useful in all ulcerations of the cornea, save where the ulcer is peripheral and there is perforation or danger of it. There eserine is called for, but in not too strong a solution (½ to gr. i to ʒ i aq.) In a suppurating condition of the cornea hot applications should always be used. Water, as hot as can be borne, to bathe the eye in, or what I have found at times very soothing, a decoction of poppy head, a large towel to be wrung out of this and applied over the closed lid, to be repeated at intervals of every few minutes for ten to twenty minutes.

If dry heat is desirable there is nothing more useful than the Japanese hot-box. The box after the cartridge is lighted, can be wrapped in a piece of soft cloth and laid

over the eye. If we find these remedies to fail, then we have to resort to surgery. The one great means which we have at hand, and which can always be depended upon, is the *actual cautery*, though oftentimes patients object to its use. But if they should, we have another means which in our hands has been most satisfactory. There is nothing in it to frighten the patient, nor is it very painful. The treatment I refer to is the application on a probe to the entire ulcerating surface of pure *carbolic acid*. I believe the late Dr. Williams, of Cincinnati, was the originator of this method. Its application requires care and delicacy of manipulation, for over-doctoring the eye with carbolic in its pure state would bring about results most direful. I take a small probe, wrap a thin piece of absorbent cotton tightly around the end, dip it into deliquescent carbolic acid, press out any surplus when withdrawing from the neck of the bottle, and touch gently the ulcerated surface. As soon as the acid comes in contact with the ulcer, the parts are seen to turn white. Only the very smallest quantity is to be used. The acid flows freely into every sulcus and furrow however small, and thus comes in direct contact with all the diseased surface. This thin veil of slough is thrown off in a short time, leaving the ulcer in a healthy condition, so that in a little while it is filled up with new tissue. This treatment is specially adapted to children with phlyctenular ulcers, for with them hardly more than one application will be necessary, unless the ulcer be very large. It can be made usually without an anesthetic. The head of the child is held by an assistant, while the operator holds apart the lids and steadies the eyeball with thumb and forefinger of left hand, while rapidly making the application with the right. I hardly ever use cocaine unless in a very small child, as the burning is almost nothing, carbolic acid being a well known obtundent of sensibility.

There is nothing though in my opinion that can fully

take the place of the topical application of the actual cautery. This is used principally in the progressive variety of ulcer, though it can be employed with telling effect from the superficial phlyctenular ulcer through all grades to the deep, largely sloughing kind. For convenience I prefer the platinum tips made for the purpose, fitted into a suitable handle and brought to a bright crimson glow by an electric battery. Having the eye cocained or the patient under the influence of chloroform, we may cauterize as much as we deem expedient, and we rarely fail to derive benefit from the operation. If the battery is not at hand we may use the bulb-pointed platinum instrument devised by Dr. Grüning, of New York, brought to a red heat in an alcohol flame or even an ordinary strabismus hook can be used. The great difficulty in employing the above without chloroform is that the patient seeing the heated instrument approaching the eye is apt to move it out of position and the instrument gets cold before the eye is ready again. Then there has to be an assistant to hold the alcohol lamp near the eye. After cauterization, the bandage had better be applied, and the usual treatment of atropia, etc., be carried out. One application of the cautery will generally be sufficient, but if not, it can be repeated at intervals of three or four days. The greatest care has to be observed in the operation not to puncture the cornea, and especially so when the ulcer is deep-seated, though if we watch closely what we are doing, we can touch the parts thoroughly that we desire and escape emptying the anterior chamber.

A REPORT OF SIX INTERESTING CASES FROM MY OBSTETRICAL PRACTICE.

BY E. R. ANTHONY, M.D., GRIFFIN.

Nowadays when our medical journals are filled with brilliant papers on laparotomies, with learned treatises on serum therapy, and scientific discourses on cocci, bacilli, and spirillæ, a report of a few cases occurring in my obstetrical practice may seem very tame.

It is with a feeling of distrust that I make this report, but each case had some points of unusual interest to myself, and I hope it may prove of interest to my brethren.

The first case I report occurred in my practice about two years ago. Mrs. A., multipara, ninth child. On examination found a breech presentation, L. S. A. position. Owing to the enormous size of the child, and to maternal dystocia also, the labor was tedious and had to be terminated by giving the usual assistance given in breech presentations that are delayed.

The maternal dystocia was due, no doubt, to organic defects in the womb. Old multiparæ frequently have protracted labor from this cause. The uterus which has frequently gone through the process of pregnancy often has its fibrous and uncontractile element increased at the expense of the muscular tissue, thereby decreasing the power of the uterus. But I report this case because the fetus was an anomaly as to size, a physiological increase in size, however. I believe that statistics show the average weight of male children at birth to be 3,300 grammes, or about seven pounds and five ounces. That of female children, 2,700

grammes, or six pounds six and a half ounces. Occasionally some enormous child is reported. Korman has reported one that weighed 9.8 kilogrammes, or about twenty-one pounds. Korman's case was also born by the breech. This child, a female, weighed fifteen pounds and three ounces, and I certainly consider it large enough to authorize me to report it.

The second case I report is a case of puerperal or secondary post-partum hemorrhage, the first and only one I have ever seen in twenty years' practice. It occurred on the fourteenth day after delivery. The patient was a healthy mulatto, aged twenty-two, second child. On the twelfth day she insisted on getting up, as she was "feeling entirely well." I told her to remain in bed until after the fifteenth day, as I usually advise my patients. On fourteenth day, without any previous warning, had hemorrhage severe enough to produce the most alarming symptoms. This patient was the wife of my colored hostler and lived in my yard in a few steps of my house. Fortunately I was at home when hemorrhage occurred and was at her bedside in a moment or two. I controlled hemorrhage by turning out clots from vagina and used streams of hot carbolized water as hot as could be borne, with fountain syringe. Also used ergotine hypodermically. Fearing that the hemorrhage might return I sent for my friend Dr. T. J. Collier. We decided, after consultation, if the hemorrhage did return, to dilate the os (which was contracted so that it would not admit the finger), and curette. We decided to dilate gradually with sponge tent, thinking, under the circumstances, it would be preferable to rapid dilatation, as the tent would act as a tampon. The size of the womb was larger than it should have been on the fourteenth day, as its outline could be traced the least bit above the brim of the pelvis, and it should have been just below the brim had involution gone on normally. The size of the womb

prevented any fear of dangerous internal hemorrhage in case we had to resort to the sponge tent. Continued use of ergot and nux vomica by mouth for two weeks when patient was convalescent.

This hemorrhage was due to two causes: subinvolution and retention of blood-clots. As a usual thing, when involution is going on naturally, the womb is adequate to the expulsion of any clots that may form in its cavity, but sometimes, as Parvin tells us, "this expulsion failing, the clot increases in size and for a time acts as a tampon pressing upon the placental site and thus prevents hemorrhage. After some days the coagulum spontaneously breaks up, the protecting pressure is at once withdrawn from the open vessels at placental site, and a hemorrhage which is perilous, or may be fatal, follows at once." In this case there was no injury to either womb, vagina, or vulva, and the above explanation is the only one I can give of the severe hemorrhage.

The third case I report has two points of interest which will be seen further on. The patient was a primipara, aged twenty-eight. Labor progressed satisfactorily and was ended in sixteen hours. Upon ocular examination of perineum, I found tear of perineum from vulval orifice to sphincter ani. The tear involved both mucous and cutaneous surfaces, and the intervening tissues. This case occurred in the country, and unfortunately I had nothing with which to repair the perineum. I went back to my patient in about twelve hours prepared to stitch perineum. To my surprise I found patient's abdomen so swollen and distended as to interfere with her breathing. As I knew it was impossible to have septic poisoning in so short a time, I was at first at a loss to account for the trouble. Upon due investigation, I found patient had nervous dyspepsia and dilatation of stomach. In nervous dyspepsia, frequently we have a hypersecretion of hydrochloric acid by the true

peptic glands. In dilatation of the stomach, food is always delayed in the stomach a long time. Now, if starchy food tarries too long in a stomach when we have a superabundance of hydrochloric acid, fermentative changes take place giving rise to an enormous amount of gas, as was the case with my patient, who had eaten heartily of bread and coffee when baby was two hours old. I decided not to stitch perineum, but adopted the old plan of tying knees together, which some object to on the grounds of interference with proper drainage. Gave for the dyspeptic ailments epsom salts till bowels acted well, and then gave salicylate soda. In a few days distention of abdomen was all gone. One month after confinement examined perineum and found that a satisfactory union had taken place. There are two points of interest in this case. One is, that every puerperal woman who has a distended abdomen has not septic poisoning; the other point is that nature sometimes repairs a lacerated perineum without surgical interference.

CASE 4.—Mrs. C., who is now pregnant, advanced about eight months, with third pregnancy. She suffered for two weeks with a severe neuralgia of superior maxillary branch of trifacial nerve, left side. The pain was excruciating on left cheek over antrum of Highmore, causing me to suspect abscess of antrum, but excluded that in my diagnosis, because the pain was marked by decided periodicity, coming on at eight o'clock in the morning and subsiding at two o'clock in the afternoon. In addition to severe pain the left eye became very vascular, and the nasal mucous membrane was swollen and would bleed on slightest touch.

If the trigeminus is divided posterior to the ganglion of Casser, these effects upon the eye and the nasal mucous membrane are hardly noticeable; but if the ganglion be divided, these effects are very marked, due to the section of the sympathetic filaments from the carotid plexus.

This fact strengthened my belief that the trouble was entirely reflex.

The same neuralgic pains in the middle branch of the nerve, vascularity of the left eye, swelling of nasal mucous membrane, came on in third pregnancy, about fifth month, and lasted over two weeks in spite of all medication. Used hydrobromate quinine both times unsparingly without noticing any oxytocic effect.

The reflex disturbances of pregnancy are legion, but why the uterus of a woman in fairly good health at other times, should vent its spleen upon this particular nerve, is hard to explain, and I think it is a very unusual experience.

CASE 5.—Mrs. G., aged twenty-one, primipara, vertex presentation, R. O. A. position. Labor was slow and tedious, lasting in all twenty-four hours. Towards the last part of second stage of labor, when head begun to press upon perineum, I found that I would have rigidity of the perineum to contend with. Concluded at this juncture to use chloroform. Patient inhaled about three drams of chloroform, the pain stopped entirely, and she went quietly to sleep. Slept two hours and ten minutes. Respiration natural, pulse normal.

Now, was the cessation of pains due to the chloroform or to uterine inertia? I say, 'twas due to the chloroform. And besides the pain stopped too suddenly for simple inertia. There are three causes for uterine inertia: defective innervation or circulation of the uterus, paralysis of the uterus from overdistention, organic defects in the uterine muscles. Neither of these causes were operative in this case, unless it was the first, defective innervation from the effects, perhaps the emotional effects, of inhalation of chloroform. Anyway, I felt that I was in a serious situation. What should I do to induce these pains to return? We all agree that the use of oxytocics should be avoided in the treatment of uterine inertia. Kristeller's method and

the forceps were the two means left me to choose from. I sent for my forceps, but before they were brought me, I had the hardihood to give ten drops of ergot and supplement it with Kristeller's method of expression. I had the satisfaction of seeing my efforts crowned with success. The pains came back with full force, the womb resumed business at the same old stand, and the labor was soon happily terminated. I would like to say in this connection that Bossi has experimented very successfully with sugar as an oxytocic in defective uterine contractions in labor. I should think that it would be free from the dangers of ergot as, according to Bossi's observations, it produces regular contractions and they do not take on a tetanic character.

CASE 6.—About three and a half years ago I delivered Mrs. F. of a robust and healthy looking male child. About the fourth day it rapidly developed symptoms of Winckel's disease, or acute hæmoglobinuria. Upon the seventh day it died in collapse. Two years ago I delivered the same lady of an apparently robust and healthy female child. Until the fifth day not a single symptom of disease or the least deviation from health could be detected. On the fifth day, precisely the same symptoms developed as in the first case, and the child died on the eighth day. The The symptoms in both cases were so nearly identical that I give them at once to save repetition. The first symptom that I noticed was a decided degree of restlessness, and a sighing or moaning respiration. This was rapidly followed by a general cyanotic discoloration of the skin combined with a decided icteric hue. The respiration was accelerated, and the pulse became more and more frequent, until I could hardly count it. The visible mucous membranes, especially of buccal cavity, had a violet color and a bruised appearance. At no time was there a rise of temperature in either case, but on the other hand there was a decided decline of temperature a few hours before death. There

were some convulsive movements and twitchings of the extremities, but no general convulsions.

When the disease first developed, there was decided disinclination to nurse, and by the second day the child could not be induced to take the breast. There was no vomiting in either of my cases. The bowels were slightly swollen and sensitive. There was a tendency to diarrhea, the stools were a brownish green color, but no marked offensive odor. The urine was scant and a dark brown or coffee-grounds color. There was no chemical examination of the urine.

Heller's sodic or potassic hydrate test for hæmoglobin in urine is simple and easy to make, but I could not get a specimen to examine. Neither was there any microscopical examination of the urine or blood. A post mortem in neither case was allowed me.

Quite a number of cases of acute hæmoglobinuria of the new born have been reported by Pollack, Parrot, Winckel, Herz, and others, but only one, Herz, reports two cases born of the some parents. The parents of these two children lost two preceding children born to them with the same disease. The attending physician called the disease pernicious jaundice. The parents of these children are healthy and robust. They are cultivated and refined, and their environments and hygienic surroundings are the very best. There is no indication of any disease in either of the parents that could be transmitted to the offspring by heredity.

The therapy in this disease, so far, amounts to nil. The pathological anatomy has been well described by the above named writers on the subject, but the causation of the disease is still a mystery. Perhaps this paper may bring out a discussion that may throw some light on the subject.

THE HISTORY OF MEDICINE AND SURGERY IN GEORGIA.

BY LUTHER B. GRANDY, M.D., ATLANTA.

Late numbers of the *Atlanta Medical and Surgical Journal* have contained a series of articles by myself on the above subject. It has been suggested that the matter be recast and condensed for record in the *Transactions* of this Association.

In our early medical history the status of medicine and surgery in Georgia, as elsewhere in the United States, was rude indeed. At the close of the Revolution there were not two hundred physicians in the new State; very few of these had ever heard a medical lecture or seen a cadaver. Medical education then usually meant an apprenticeship of uncertain duration in some doctor's office, spent in reading the latter's books, which were few and imported from the mother country, and in compounding his medicines from the raw materials. The principles of medicine were three—blood-letting, blisters, and purgation, with salivation and emesis as adjuvants. The greatest of these was blood-letting. There was no god but the lancet. Dr. Benjamin Rush, of Philadelphia, the "Father of American Medicine," was its prophet and great high priest. Then the resources of therapeutic art first carried the patient to the verge of eternity. The reparative powers of outraged nature brought him back, what was left of him, if he could come. As to the results obtained by the *fin de siècle* methods of that time, we have it on the authority of the great Rush—and he

probably knew—"We have assisted in multiplying diseases. We have done more; we have increased their mortality."

I must refer in passing to two of our medical men in the last century who left for a while the more humble duties of their profession to serve the colony in the troublous times which then tried men's souls. Dr. Lyman Hall, of Sunbury, and Dr. Noble Wimberly Jones, of Savannah, were respected and successful practitioners. Both were ardent revolutionists, and each represented his parish in the Continental Congress. Dr. Hall was one of our three signers of the Declaration, and after the war the first governor of the State. With the restoration of peace Dr. Jones resumed the practice of his profession. Each of these patriot-physicians commanded alike the confidence of patients and political constituents.

Before 1800 epidemics of smallpox at various times had visited our coast section. Inoculation with true smallpox virus had been practiced as a preventive measure, but even this was done only upon a military permit. There is no record of the first introduction and practice of true vaccination. I estimate that this must have occurred about 1803, soon after the introduction of it into South Carolina by Dr. Ramsey in 1802.

Yellow fever was then a disease of almost perennial interest, and in the confused nomenclature of the day was called "autumnal," "malignant remittent," "malignant bilious," etc. Dr. J. E. White, of Savannah, was one of our earliest writers on the subject. He was the author of several good papers on the climate and diseases of Georgia (*Medical Repository*, 1804–1805). Dr. White and others in Savannah believed in the domestic origin of the disease, and pointed to the undrained rice-swamps about the city as the culture-ground of these fevers. They urged upon the officials the necessity for drainage. When this was finally carried out the fevers abated both in frequency and severity.

There was one method of treatment—the lancet. It was a "divine remedy."

An important factor in these early sanitary measures was the Georgia Medical Society, organized in Savannah in 1804. It was among the first medical societies in the country. Its objects were the advancement of medical science, mutual benefit to the members, and the restriction of abuses in the practice of medicine.

In the years between 1805 and 1820 there was some activity in western migration. The interior of the State was vacated by the Indians; the white man took possession and proceeded to level the forests and open up the soil. "Bilious fever appeared as suddenly as the face of nature was changed by the hand of man. For eighteen years it was a formidable epidemic." Five per cent. of the population died each year from this cause alone. "This mortality happening in a few months gave to the disease the terror of a pestilence." (Dr. Tomlinson Fort.)

About 1818 the Thomsonian or Botanic School of Medicine made its first appearance in Georgia, through the agency of traveling representatives of Thomson, who sold his book and the right to use his remedies in the family for twenty dollars. Georgia was destined to become one of the strongholds of this system of ignorance. The Thomsonians rejected entirely the methods employed by the regular profession, relying exclusively upon certain vegetable agents, steaming, etc. These agents consisted mainly of lobelia, capsicum, and a combination of hemlock, bayberry, ginger, pepper, and cloves, under the name of "composition tea," which was used to meet almost every indication. The most ignorant people became the self-appointed apostles of the new faith. Quacks and impostors of the worst sort took advantage of the cheap opportunities thus afforded to practice physic, and the crimes that were committed in the name of botanic medicine, steaming, etc., went unpunished. "The

degrading stain of Thomsonianism was a disgrace to the American character; the most stupendous system of quackery and the most insulting offering ever tendered to the understanding of a free and enlightened people." (Dr. M. Antony.)

In such circumstances it was evident that legislative action would be necessary to protect the people from the consequences of such ignorance and fraud. The regular profession secured from the legislature of 1825 an act "regulating the licensing of physicians." This was the beginning of medical legislation in the State. The act provided that from and after its passage no person should practice medicine or surgery in the State without license. It established a "board of physicians," whose duty it was to examine all applicants, licensing only those who were found competent. Applicants holding diplomas from medical colleges were exempt. Those who witnessed the operation of this law say that it did good service.

Dr. W. C. Daniell, of Savannah, was a prominent and successful practitioner. In 1826 he published a monograph entitled "The Antumnal Fevers in Savannah," which was an important contribution to the literature of this subject. Dr. Daniell was the first in this country to use the weight and pulley in the treatment of fractures of the thigh. One case was thus treated in 1819, another in 1824. (See *American Journal of Medical Sciences*, August, 1829.) Dr. Antony, of Augusta, was led to adopt the method in five cases, and his judgment of it was that "it established a plan of treatment calculated to insure the best success with the simplest apparatus and the least distress." (*Southern Medical and Surgical Journal*, October, 1836.) Many years later Dr. Gurdon Buck made use of the same principle in the New York Hospital.

Dr. Milton Antony was a remarkable man and a physician of rare skill and ability. One operation in his early

career (March, 1821) was a pioneer in lung surgery. For empyema, the anterior halves of the fifth and sixth ribs were excised, a large accumulation of coagula was removed from the chest cavity, and portions of disorganized lung tissue taken away with the fingers. Patient was not cured, but much benefited, by the operation. (*Philadelphia Medical Journal*, vol. vi., p. 108.)

Dr. Antony was the founder of the Medical College of Georgia (1830) and of the *Southern Medical and Surgical Journal* (1836).

The college and the journal made Augusta, for many years, the medical center for a large Southern territory. The faculty of the college from the first took a high stand in favor of the best medical education that the times could afford. Dr. Jos. A. Eve and Dr. Lewis D. Ford, Dean, were particularly active in their efforts for higher medical education. The recognized four "cardinal defects in the existing system of medical teaching—viz: the want of preparatory learning, the paucity of branches taught, the shortness of each session, and of the whole period of instruction before graduation."

In May, 1835, they attempted to obtain a convention of representatives of the fifteen medical schools in the country "for the purpose of establishing an uniform system of requirements for graduation; of regulating the courses of professional study . . . and of counseling generally about the means of rendering our institutions most successful in diffusing the benefits of medical education."

Nothing came of this suggestion. The majority of the colleges either took no notice of it, or declined co-operation on the ground that "the time had not yet come when a prolongation of the term is necessary." This position was denounced in a masterly paper by Dr. Eve, in the *Southern Medical and Surgical Journal*, September, 1836. But this

paper came and went like the voice of one crying in the wilderness.

Dr. Richard Banks, of Gainesville, was famous in his time. He was modest to a fault, and his best work is not of record. He was the first American surgeon to extirpate the parotid gland—in 1831. The operation was done with success for a tumor of the parotid. The temporo-maxillary articulation was dislocated in the manipulations. Dr. Banks was widely known from his successful operations for stone in the bladder. He was the contemporary and compeer of the great Dudley of Kentucky. He did the lateral operation, with the aid of the gorget. The present county of Banks was named in his honor.

The story of the discovery of anesthesia by Dr. Crawford W. Long, of Jefferson, Jackson county, in 1842, has been told over and over again by Dr. Long and others, and is now well-known medical history.* He withheld his cases from precipitate publication because he wished to study the phenomena of anesthesia, to determine both the limitations and possibilities of ether. Medical journals, every month, were full of discussions upon "animal magnetism," "mesmerism," etc., and wonderful reports were coming from foreign hospitals of surgical operations being done without pain during the "magnetic sleep." Indeed, one surgeon had written a monograph entitled "The Practical Application of Mesmerism in Surgery." Dr. Long was an unbeliever in this so-called science. Hence, he says, and very naturally, "I was the more particular in my experiments in etherization." Such was the reason for his silence. Medicine then, as now, furnished many examples of the rise and fall of "discoveries" prematurely announced. He did not wish to add another. In the meantime, another

*Southern Medical and Surgical Journal, December, 1849; Virginia Medical Monthly, May, 1877; Transactions Georgia Medical Association, 1881; Virginia Medical Monthly, October, 1893; History of the Discovery of Anesthesia, by Dr. L. W. Nevius, New York; Atlanta Medical and Surgical Journal, February, 1895.

discovery of anesthesia is made, and a sad chapter is added to the history of American medicine, the tragic details of which we cannot go into here. However, the "ether controversy," which could never be decided during the lifetime of the participants, is now being settled by impartial judges, and each of the four claimants is being awarded his proper place in relation with the discovery.

Dr. Tomlinson Fort practiced medicine at Milledgeville for nearly fifty years. Dr. Fort was reared in the school of Rush, but he did not agree altogether with his great teacher. He advocated the use of Peruvian bark for remittent fever, against the teachings of Rush. He opposed the indiscriminate employment of blood-letting, and the too liberal use of mercurials. In 1849, he published his "Dissertation on the Practice of Medicine," a volume of several hundred pages, which he dedicated to the physicians of Georgia. We are told that he stood through his long life above reproach, and that he contributed his full share to the changes in the practice of medicine which occurred during his lifetime.

Dr. Lewis D. Ford, of Augusta, did much toward establishing correct ideas as to the nature and treatment of the malarial fevers. Dr. Ford was the first to classify them properly, saying that though "differing in their external features, they were fundamentally of the same nature and required the same mode of treatment." He introduced and advocated the "abortive plan" of treatment—large doses of quinine—large enough to prevent a recurrence of the paroxysms. Under this treatment, Dr. Ford says, intermittent fever ceased to be the "despair of organic medicine." Dr. Ford was the Nestor of medical education in Georgia. His association with Dr. J. A. Eve in an effort (unsuccessful) to secure a high and uniform system of medical teaching has already been referred to. Dr. Ford was

Professor of Practice in the Medical College of Georgia for nearly fifty years.

Dr. Paul F. Eve was a distinguished surgeon. He introduced in America the bilateral operation in lithotomy (*American Journal of Medical Sciences*, April, 1854). This was Dr. Eve's favorite method of operating for stone, and he did more than any other American surgeon to give this method a well-recognized status in surgery. The first successful abdominal hysterectomy in America was performed by Dr. Eve in April, 1850. The patient lived four months, and died from a recurrence of the malignant growth.

Dr. Joseph A. Eve was eminent as a teacher, and in the special field of obstetrics and diseases of women. For over fifty years he occupied this chair in the Medical College of Georgia, and his lectures are still remembered as classics by a large number of Southern physicians. Dr. Eve was an earnest advocate of advanced medical education, and made every effort to induce all the colleges of the country to raise the standard—all to no avail.

The Georgia profession never had a more worthy representative than Dr. Louis A. Dugas. He was the first in this country to apply the test of surgery to "animal magnetism," or "mesmerism." In 1845, he operated three times upon a Mrs. Clarke during the "mesmeric sleep" for a recurring carcinoma of the breast. In the third operation, the axillary glands were also removed. "The patient gave no indication whatever of sensibility." (*Southern Medical and Surgical Journal*, March, May, and September, 1845.) Dr. Dugas believed that the phenomena of mesmeric sleep might be so utilized as to "render them available to all sufferers." Dr. Dugas was the first to call attention to the most valuable diagnostic symptom of shoulder-joint dislocations. This sign was the inability to place the fingers of the dislocated limb upon the sound shoulder

with the elbow in contact with the thorax. (*Transactions American Medical Association*, 1857.) For penetrating wounds of the abdomen Dr. Dugas was the first to advise opening the cavity at once to locate and suture wounds of the intestines. In this matter he antedated Marion Sims by several years. Dr. Dugas's paper on this subject before the International Medical Congress, Philadelphia, 1876, was a sound and forcible argument for a "change of practice in such cases" of penetrating wounds.

Dr. Henry F. Campbell was the first to practice and advocate ligature of a main artery going to a part for the treatment of inflammatory processes or threatened gangrene. He used this principle with success in a number of cases during the late war. (*Confederate Manual of Military Surgery*, page 297.) In 1850 Dr. Campbell published some interesting physiological studies upon the excito-secretory and excito-motor system of sympathetic nerves. Two years later, the same system was independently discovered and described by both Dr. Marshall Hall of London, and M. Claude Bernard of Paris. These gentlemen, upon learning of Dr. Campbell's studies, promptly awarded him the credit of priority. (See papers by Dr. Campbell, *Southern Medical and Surgical Journal*, June, 1850; *Transactions American Medical Association*, 1853 and 1857, Prize Essay; London *Lancet*, May 2, 1857.) Another important paper by Dr. Campbell afforded the most rational explanation of the action of quinine on the parturient uterus, from its properties as a cerebro-spinal depressant. (*Transactions American Gynecological Society*, vol. v.)

The late Dr. J. B. Bean, of Macon, divides with Dr. Gunning, of New York, the credit for inventing and introducing the interdental splint of vulcanized rubber for the treatment of fractures of the lower jaw. The splint was made from plaster casts of the teeth and gums, and was used with good results by Dr. Bean in the Macon hospitals

during the war. The apparatuses of Bean and Gunning were devised about the same time, and independently of each other. (*Richmond Medical Journal*, February, 1866.)

Dr. Robert Battey, of Rome, was the first surgeon in the State to do an ovariotomy (1867) for the removal of a large dermoid cyst. Patient is still living. On August 17, 1872, Dr. Battey first performed the operation since known by his name, "with a view to establish at once the change of life for the effectual remedy of certain otherwise incurable maladies." The operation, which was at first condemned in vigorous terms, gradually gained professional recognition and indorsement. Sims, who, in 1872, had been "astounded at the audacity of this operation," said, in 1877, that Dr. Battey had "reasoned out a truism; . . . and that his operation was based upon sound physiological doctrine." The best descripton of the proper indications for Battey's operation is Dr. Battey's paper before the American Gynecological Society, 1880. (See also *Atlanta Medical and Surgical Journal*, September, 1872, and January, 1887.)

Four years before the late revival of suprapubic cystotomy for stone in the bladder (1880), Dr. E. F. Starr, of Nacoochee, had done the operation with success, removing a calculus which weighed nine drachms. The case is reported at length, with comments, in the *American Journal of Medical Sciences*, July, 1877.

The name and reputation of the late Dr. W. F. Westmoreland are too well known to the members of this Association to require much notice here. Reared a surgeon under the special instruction of such masters as Velpeau, Nélaton, Ricord, and others, he acquired by study and experience a high operative skill and accurate powers of diagnosis. In 1855 he was one of the organizers of the Atlanta Medical College, and honorably filled the chair of surgery for the remainder of his life. Dr. Westmoreland did not

write much; so that some of his best work and most valuable surgical experience are not available for reference.

In 1884 Dr. J. McFadden Gaston, of Atlánta, made some interesting and valuable contributions to gall-bladder surgery, pointing out the feasibility of establishing a communication between the gall-bladder and duodenum in cases of obstruction of the bile-duct. Dr. Gaston's conclusions were based upon a series of experiments upon dogs. (See *Atlanta Medical and Surgical Journal*, September and October, 1884, and September and November, 1885; *Gaillard's Medical Journal*, October, 1884; also article on "Gall-Bladder Surgery," by Dr. Gaston, in *Reference Hand-Book of Medical Sciences*.) These experiments and suggestions have been acted upon by a number of surgeons, and now duodeno-cholecystotomy (or cholecyst-enterostomy) occupies a well-defined place in abdominal surgery.

The old medical practice act of 1825, with some slight changes and an intermission of three years, remained a law until 1881. Its last years, however, were marked by the most flagrant abuses, and it became obnoxious to the friends of efficient medical legislation. In 1881 another medical act was passed, which was possibly less objectionable than the old, but equally inefficient. The present law, requiring three boards of medical examiners—regular, homeopathic, and eclectic—had its origin in the Atlanta Society of Medicine, November, 1892. It promises to be better than its predecessors.

The Georgia Medical Association was organized in Macon, March 20, 1849. This organization of the State profession was called by the Medical College of Georgia and the medical societies of Macon and Savannah. There were about eighty delegates present. Among them, Dr. Lewis D. Ford, chosen President; Dr. R. D. Arnold, Vice-President; Dr. J. M. Green, Corresponding Secretary; Dr. Chas. T. Quintard, Recording Secretary; Dr. Thomas R.

Lamar, Dr. Robert Campbell, Dr. G. F. Cooper, Dr. C. B. Nottingham, Dr. F. A. Stanford, Dr. Charles West, Dr. H. Steele, Dr. J. F. Alexander, Dr. S. D. Brantley, and others. Of the eighty original members, only Dr. Alexander and Dr. Brantley are now living (April, 1895).

READY METHOD OF RESUSCITATION IN SUSPENDED ANIMATION, WITH REPORT OF CASES.

BY PALAMON L. HILSMAN, M.D., ALBANY.

In presenting this method to the profession, the writer claims no priority in its use, being aware that it has been practiced by others, and possibly by some of those present, but as it is always available, and having been more successful in his hands than other means, he trusts that he will be pardoned for thus bringing it to your favorable notice. This means, which I have called the ready method, consists in the direct inflation of the subject's lungs by those of the attendant, by mouth to mouth contact, viz.:

The patient should be placed on a table or bed (if at hand), lying on back, with shoulders slightly elevated and head a little inclined backward. The physician now seats himself to the right side of the patient, and with the left hand compresses his nostrils. Now, fully inflating his lungs he adjusts his mouth to that of the subject, and gradually but forcibly expels the air from his lungs into those of the subject. As a preliminary step, it is well to let the air escape through the nostrils, once or twice, to clear the cavities of accumulations. If the subject be an adult, too much force cannot be used in the expansion; but in cases of infants, it is safer to desist in the effort when the lungs are fully expanded, as evinced by the resistance to the expiratory effort, as well as external evidence of expansion. After each inflation the subject is turned on the side, and gradual but firm compression of the chest is made to facilitate the expira-

tory effort. The act should be repeated from twelve to twenty times per minute until natural respiration has been established. The first evidence of returning life will be a change in the color of the face, showing oxygenation of the blood, or an effort at heart throb. Should the mouth of the subject be abnormally large (as was the case in one incorporated in this report), it will be necessary to pucker either angle with your fingers, and call on your assistant to do the respiratory act. Prior to ten years ago the writer had restricted this method in his practice to still-born infants, when, having lost a patient from chloroform narcosis (other means failing to resuscitate), he resolved never to let another die under similar circumstances without giving the ready method a trial. Since then he has had ample opportunity to test its merit in like cases with the most satisfactory results, and now feels that it would be criminal on his part should he fail to give his patient the benefit of its practice.

In cases of drowning (after temporary suspension by heels to drain cavities), shock by electricity, or in any case that demands artificial respiration, this method commends itself.

My records show a large number of still-born infants treated by this methods, but I will only include a few of special interest in this report.

REPORT OF CASES—STILL-BORN INFANTS.

CASE 1.—Was called in consultation with Dr. A. to attend Mrs. D. in her third confinement. Found a shoulder presentation; child delivered by podalic version; was still-born, and was turned over to my colleague, who soon abandoned it as lifeless, and returned to assist with the mother. As an experiment, I took charge of the child, and, to the amazement of my genial friend, began the ready method. After a few minutes we were astonished to

notice signs of returning life, and eventually the little one was resuscitated.

CASE 2.—Mrs. M., very fleshy, low stature, weight 250 pounds; third confinement, breech presentation, labor tedious; head being retarded, forceps were used to complete delivery; child asphyxiated. Ready method pursued; lividity soon began to give way to normal color, and after the lapse of twenty minutes a faint effort at normal respiration was noticed. It was necessary in this case to continue the method for an hour before regular respiration was established.

CASE 3.—Same lady had a tedious delivery in her fifth accouchement, due to large size of child and excessively fat genitalia. Child was asphyxiated, necessitating the use of the ready method to revive it.

CASE 4.—Mrs. S., primipara, age thirty-eight, after a tedious labor, was delivered of still-born child without manual assistance. Cord failed to bleed when cut. Ready method was commenced in this case without hope of reward. However, after prolonged effort, returning oxygenation encouraged me in my work. In a few more minutes (being at least twenty after birth), a faint heart throb was noticed, which was soon followed by irregular efforts at respiration. After an hour's work, being greatly fatigued, I commenced the use of battery, hoping to keep up respiration, but without success. This case demanded the use of the method for six hours before it could be left to its own powers. Child failed to grow off well; was paralyzed on one side; had an imbecile expression, and soon began to have epileptiform attacks, dying in one of these seizures when fourteen months old. Paralysis and convulsions attributable to cerebral emboli, incident to prolonged inanimate state.

CASE 5.—Mrs. McC. Fourth confinement. Found cord prolapsed without apparent circulation. Os dilated to three

inches in diameter. Instruments applied and delivery rapidly acccomplished. Cord exuded a thick grumous blood on being cut. Ready method used and resuscitation eventually followed, though respiration was sighing in character. Convulsions came on in twelve hours resulting fatally. Convulsions in this case was also attributable to cerebral emboli, as no violence was used in the instrumental delivery.

CASES OF CHLOROFORM NARCOSIS.

CASE 1.—Was requested by Dr. S. to aid him in the reduction of a shoulder dislocation of three weeks' duration. Patient, a young colored man, had already been under the influence of chloroform for half an hour, and unsuccessful efforts made at reduction. Requesting that the subject be again relaxed, chloroform was resumed, when almost immediately he ceased to breathe. After prolonged but useless efforts to resuscitate him by other means, I took charge of case and commenced the ready method. Not more than ten insufflations were made when patient began again to respire, and I at this moment readily reduced the laxation, although strenuously opposed by both my colleague and the patient's father, saying, "That we had better let well enough alone."

CASE 2.—J. T., colored, aged twenty-four. Called at my office at 10 o'clock A. M., having left his home in the country before daybreak and ridden to town, a distance of thirty miles. He had an appointment with me for the removal of a large keloid growth springing from one ear. Having fasted since the evening before, and being chilled from his journey, he was in no condition for the operation: but being compelled to return home that evening, I arranged for an immediate operation. Assisted by my young friend, Dr. Leonard E. Welch, then a student of medicine, I brought my patient under the influence of chloroform

and made one free incision, when suddenly my patient gave a sighing respiration, and was apparently dead. Ready method was at once attempted, but to my chagrin, our mouths could not be made to fit, as that of my subject was normally cut six and one-half inches by actual measurement. I at once puckered up either angle with my fingers, and called on my young friend to do the pumping act. Being gifted with a good set of lungs, and realizing that my patient's life depended upon his efforts, he pumped away with the power of a steam bellows; and after prolonged effort, had my patient again breathing. I then took a stitch to control a bleeding vessel, when he again ceased to breathe, demanding further effort to revive him. Wound was now dressed antiseptically, and operation completed on fourth day under the influence of whisky.

CASE 3.—W. A., colored lad, aged ten years. Operation for flexion of forearm, due to extensive cicatrices following a burn. Assisted by Dr. W. L. D. We commenced the administration of ether, which proving slow in its action I insisted on adding chloroform, and patient was soon anesthetized. Cicatrices were now freely divided and forcible extension made, when our patient suddenly stopped breathing. Ready method used, which soon established normal respiration, and operation was completed.

REMARKS.

In advocating the ready method please bear in mind that I do not urge its adoption, as a rule, until simple means, as flagellation and cold douche have been tried, as in the majority of cases they will suffice; but, in grave cases at the outset, or when other means have failed, would I insist on its adoption, to be long persisted in before hope is abandoned.

Some years ago I read with great interest an article copied from some foreign journal, advocating a hand bel-

lows for artificial respiration. This apparently is practical, and would have the advantage of introducing pure air, but it is counterbalanced by many disadvantages, viz.: not being always at hand, difficulty in adjusting it to mouth of subject, necessitating the aid of an assistant, and danger of rupturing air vesicles from excessive distention.

As an objection to the use of the ready method, it may be urged by many that it is uncleanly and attended with danger of infection. To such I would remark, that he who is not willing to humiliate himself, and even risk his life for others, is unworthy of his high calling.

MENTAL SUGGESTION AS AN AID IN THE TREATMENT OF MORPHINOMANIA.

BY SAMUEL H. GREEN, M.D., OAKDALE.

I shall not attempt to elucidate the mysteries of psychic phenomena, nor will I venture upon a discussion of suggestion which has been called the all-powerful factor in hypnotism, but rather beg leave to offer for your consideration a résumé of two cases of morphinomania which I successfully treated and in which I was greatly aided by suggestion.

On September 10, 1893, I received into the hospital of the Chattahoochee Brick Company's branch of the Georgia penitentiary Robert D., white, aged thirty-five, who had been according to his own statement, addicted to the morphine habit for over five years. The prison guard who brought him from the jail, not being instructed by the county physician, refused to let him have the drug during the trip, and, as a consequence, when he reached the hospital he was almost immediately seized with a violent convulsion. A letter from a reputable physician, who had attended him professionally during his incarceration in jail, stated that he was in the habit of using four hundred grains of morphine a day. I restored patient by hypodermatic injections, and ascertained that his stomach frequently failed to take up the morphine, and then he was in the habit of resorting to the needle. Hundreds of red blotches, which literally covered his arms and legs, bore out this statement. The patient said that he had been told that

when he arrived at the penitentiary, the morphine would be cut off, and begged piteously that it be not done. After reflection I decided upon a new line of treatment in this case, and in order to secure the patient's confidence, I resorted to diplomacy. I told him that he had been misinformed, that his supply would not be cut off, but that he had been addicted to the habit so long that he could not do without it, and that I would furnish him the drug as long as he remained in prison. As an earnest of good faith on my part I gave him a little over three ounces of morphine in a bottle, instructing him to take it when he thought he needed it, and to come to me for another supply when he had used that. Promptly on the afternoon of the fourth day he asked for another supply. In the interim I had kept the patient under surveillance, and in every way possible had fortified my already strong hold upon his confidence. I told him that the morphine I had had been on hand for several months, and when kept so long lost a percentage of its potency, and to counteract this loss of strength it would be necessary for me to make a solution and add another drug to the mixture. I took a quart bottle, filled it with water, and put three hundred and sixty grains of morphine in it; of this mixture I gave him a tablespoonful three times a day, and placed him on a light, nutritious diet. On the third day patient showed rapid, nervous heart. I told him it would be necessary to increase strength of mixture, and that I would give him a drug which, when taken into the stomach an hour after the morphine solution, would make the latter more effective. In the meantime I had secured a quart bottle exactly like the one containing the morphine mixture, and after filling it with water, had placed it in my medicine cabinet. When I noticed that he observed my actions, I took the bottle of water out, and putting about half an ounce of sulphate of quinine in it, set it away in the cabinet again. The patient smiled confi-

dently when he saw me do this. I then gave him his regular dose of the morphine solution, telling him that the recent addition had made it extraordinarily strong. Patient concurred with me in this, saying that it tasted "awful strong." Patient complained that his legs and arms pained him like they did when he had been deprived of morphine on his journey from the jail to the penitentiary. I told him that it was caused by rheumatism, and that I would give him something that would cure that. I took a two-ounce bottle, put four fluid drachms each of tincture of iron, chloride, and digitalis in it, filled it with water, and commenced giving him ten drops three times a day. I had kept patient on morphine mixture two weeks, when I commenced a further reduction by putting in a tablespoonful of water every time I gave patient a dose of the mixture. I kept him on this treatment, also the digitalis and iron, for four weeks, when I commenced to give him five grains of quinine in solution four times a day. Patient began to improve greatly, circulation became better, and his appetite increased wonderfully. At the expiration of seventy-two days I gave patient last dose of morphine mixture, which under the reduction of one thirty-second of the solution, each dose was virtually water, and had been so several days. Patient continued taking quinine solution, believing he was still on morphine mixture. I kept up digitalis and iron, and in exactly four months from date of entrance to hospital he was doing light work in prison blacksmith shop. Patient weighed one hundred and twenty-eight pounds when he arrived at prison, and six months from date of reception weighed one hundred and ninety-five. When I informed him that it had been some weeks since he had taken any morphine, he was greatly astonished, but after awhile seemed much pleased, saying that he would never use morphine again as long as he lived. Prisoner was pardoned by the governor shortly afterwards, and went back

to his home where he now pursues his avocation of blacksmith. I have received several letters from him, in which he says he thanks God that he is free from the habit forever.

Edwin H., white, aged twenty-seven, was admitted to the prison hospital on the 16th of June, 1894. Patient had been an opium-smoker for two years and had then shifted to morphine, and had been addicted to the morphine habit over three years. When I first saw him patient was using about three hundred and eighty grains of morphine daily; patient had been an inveterate cigarette smoker for over twelve years, and so excessive had been his use of them that on the first day of his admission to the hospital he had two hemorrhages from his lungs, losing nearly half a pint of blood. I stopped hemorrhage by giving elixir of vitriol, one-half ounce, added to four ounces of water in half teaspoonful doses in wineglass of sweetened water every hour. Patient realized that excessive cigarette smoking had caused the hemorrhage and never cared for them again. Patient was a man of intelligence, and I commenced to secure his confidence by telling him that I sympathized with him greatly in his trouble and that I would be pleased to do anything I could for him. Patient said that he had been informed that in penal institutions it was customary for the physician to cut down the supply to morphine habitués in the shortest possible time; said he had been using opium and morphine so long that if he were denied his usual quota his shattered nervous system would not be able to stand the shock, and that he would surely succumb. I concurred with patient and told him that, as he only had to stay in prison twelve months, I would supply him with as much of the drug as he desired. In the interim to counteract the effect of the two hemorrhages I gave him subcutaneous injections of five drops digitalis and half a drachm of whisky. I let him

have his usual quota of morphine for four days, after which I made a solution of three hundred and sixty grains of morphine in a quart of water as in case number one. I told patient that, on account of the hemorrhages, it would be necessary for me to make a solution of the morphine so that I could incorporate another drug to increase its power. In order to strengthen him, I put him on four drachms of the quinine solution three times a day. I also gave him ten drops of the digitalis and tincture of iron chloride three times a day. On same day reduction of morphine was made patient complained of pains in legs and arms. I gave him hypodermic injections of half a drachm of whisky at intervals of six hours, keeping up the injections for three days, at the expiration of which time I ceased giving the whisky and commenced giving him five grains of quinine sulphate four times a day. In the meantime had placed him on a light, nutritious diet, occasionally between meals giving him a cup of malted milk. Patient inquired if I had not reduced morphine some. I told him that the medicine I had given him for the hemorrhage had blunted his sense of taste, but that if he did not think it strong enough I would add more morphine. I then went through the operation of putting quinine in a quart bottle of water where he could observe the action. Patient was immediately reassured and commenced to mend rapidly. When he had been on morphine mixture two weeks, I commenced reduction by placing in bottle a tablespoonful of water for every one of the mixture taken out. Reduction was gradual, but patient improved, and at the end of sixty-two days I told him he was taking water made bitter by a little quinine. Patient was surprised, but said he was glad that I had adopted that method of reduction. Patient weighed one hundred and twenty-six pounds when admitted to hospital. He at this writing weighs one hundred and eighty-five pounds. He is now, April 1, 1895,

hospital steward at the prison hospital, handles morphine almost every day, and is thoroughly cured of the habit. To use his own language, he "becomes thoroughly nauseated when he thinks that he was ever addicted to the habit of using the vile stuff."

The remarkable feature in these cases was the enormous reduction from four hundred grains in case number one and three hundred and eighty grains in case number two in twenty-four hours, to fifteen grains each in both cases in the same length of time without any bad effect except the rapid, nervous heart and pains in the limbs, which disappear like magic under the combination of digitalis and iron, quinine and suggestion.

Will you not concur with me, gentlemen, when I say that suggestion is a great aid, if nothing more, in the treatment of morphinomania?

I beg leave to say that I am much indebted to Dr. Wm. O'Daniel, ex-State physician, for valuable advice in connection with the above cases.

THE MODERN OBSTETRICAL PRACTICE—SOME CAUTIONS SUGGESTED BY TEACHINGS AND PRACTICES NOW IN VOGUE.

BY C. D. HURT, M.D., ATLANTA.

Woman is the creation of infinite wisdom. In planning her physical, moral, mental, and social nature Omniscience designed—

First. That she should be the burden-bearer in multiplying the race by furnishing the healthy ovum for impregnation, by carrying and nurturing the embryo, giving birth to the viable offspring, and then in nurturing it by the secretions from the mammary glands during its infantile life.

Second. That she should be the medium for controlling the moral nature of her offspring, so that excesses of every character which tend to degradation and disintegration should be held in abeyance.

Third. That her mental endowments should fit her to perform the offices in domestic life for which man is wholly unqualified.

Since the transgression of our foreparents the edict that she should suffer pain and travail has remained in force.

Now you may ask, "What has all this to do with the subject you have announced?" If we could eliminate any influences which, growing out of the disturbances of these various elements of her nature, prove detrimental to woman's successful transit through the parturient state, then we might pass unnoticed what I here intend to emphasize. It is this, the obstetrician who gets the best general

results as to mother and child, is he whose efforts are farthest extended in the care of her mental, moral, and phyical condition during the period of gestation and parturition. I am here confronted with the statement, that the illiterate, and to a degree, immoral and savage have less trouble in any period of child-bearing than do our civilized and cultured women. There is a compensation demanded of the physical when we arrive at higher social and moral culture. These latter attainments need not necessarily inveigh against woman's physical development and strength, but there comes into society life more or less of intemperance which breaks the equilibrium and sets the different elements of woman's nature to warring with each other. Since it is a fact that this equilibrium in woman is so liable to disturbances, the obstetrician must be on the alert to restore and maintain harmony in all the functions of the pregnant female. The most pleasing duty is to have your patient freed from the thousand and one misfortunes which befall the child-bearing woman, and to which such a large per cent. in this day of enlightened science become martyrs. Let us not undervalue the good that comes to us and our patients by attending to all the elements and characteristics of her nature. It is true that in the different strata of society this caution is more or less valuable to the obstetrician, but even among the paupers and reprobates I imagine that such efforts would not be entirely destitute of reward. The ideal patient to the careful and painstaking obstetrician is she whose moral, mental, and physical nature is developed to the highest degree.

Being called to a patient who has (or claims to have) arrived at full term, we make such inquiries and elicit such facts as may enable us to determine whether labor is at hand, whether all the organs of the body are uninterrupted in their functions, making special inquiry as to the kidneys and bowels; we should secure a competent nurse, and hav-

ing taken all necessary observations and made due preparations, it is the privilege of the obstetrician to wait in some comfortable room of the house, or to retire to his office to be summoned later. This waiting to the busy practitioner is a severe tax on him, and he is sometimes tempted to expedite the work of his patient when the best reason he can give is, that he desires to be free for other work. With this restlessness on his part, and in some cases the urgent appeals of the family and friends, he overrides his good judgment and branches out in the more rapid delivery. In such cases when the patient is progressing rather slowly but with sufficient certainty, if she is interfered with, we too often demonstrate that we have gained no time and injured the prospects and comfort of the patient.

Another incentive to interference is a desire on the part of the obstetrician to show his dexterity in the use of instruments. He justifies himself in this desire and self-confidence by having been told by his professor not to delay until his patient is exhausted. He is ready to imagine that the greatest danger to a charge of malpractice is from his want of operative proceedings. To his mortification he may in the end acknowledge his weakness and inability and indulge in the sentiment akin to that experience by Ramsbotham, who, when once tempted to interference found, that fortunately for him, he had left his forceps at his office, that it was quite a distance, and that the messenger could only secure a slow horse to ride, and that by the time these difficulties were overcome the patient had been delivered *per vias naturalis.*

The obstetrician of to-day has his armamentarium made of articles unused until the past quarter century. Chief among these are the antiseptic tablets, bandages, absorbent cotton, iodoform, and boric acid. Being myself a convert to antisepsis, I deem these all right and useful where there is occasion for them, but all men are not disposed

to observe the occasion, are not careful to discriminate between asepsis and antisepsis. To bear in mind that asepsis may be a natural condition of the mucous membrane, even though it be covered with copious secretions, is not sufficiently impressed in the teachings of to-day. Many men remember that they were taught to wash away abnormal secretions from the vagina just before delivery, and to wash away all débris after delivery. The question is here appropriate, what are abnormal secretions during labor? A free secretion of mucous from the vaginal glands is designed to lubricate the parts, to cause relaxation, and to shield them against irritation and contact with noxious influences. Lieshman says: "Upon the quantity of this secretion the ease of labor undoubtedly depends in no small degree. It is needful not for its lubricating action alone, but because its appearance involves a softening and preparation of the tissues. From this copious secretion the accoucheur augers an easy and speedy labor, while from a dry, rigid, and constricted vagina he expects that labor will be tedious and exhausting.

A short time since I found this expression in one of our journals from a professor of obstetrics: "I advise washing the secretions from the vagina by the use of antiseptic lotion during the first stage of labor." He qualifies this by saying that in some cases the secretions may be poisoned with micrococci or other noxious material. But the stress which he puts upon the first proposition is calculated to mislead the student, and send him away resolved upon no departure from the statement of his tutor that in all cases he will see to it that no mucous is lodged in the vagina.

Ridgeway Baker describes the advantages of antiseptic irrigation before and after delivery.

Lapthorn Smith, of Montreal, is quoted as saying that the vaginas of all women are infected because all their husbands have had gonorrhea. We are left to infer that either

gonorrhea is an endemic disease not inhibited in British America, or that the men are given to immorality and unlimited sexual dissipation. Such an assertion fosters an idea which encourages obstetricians and gynecologists in extravagant errors in their teachings. The invasion of the vagina, the uterine cavity, and the urethra by instruments is too often done without sufficient warrant or necessity. We may wash and bathe the parts so much as to make them untidy and unclean. By removing all secretions from the vagina you subject it to increased irritation and expose it more freely as a harbinger to vile intruders.

Again, some of the antiseptic washes, if too strong in the solution, may excoriate the mucous surface and convert it into an open wound for the absorption of putrid matter and septic material for days thereafter.

All efforts to substitute the normal secretions have been a failure. Vaseline, creoline, albolene are objectionable because of their ready absorption. Olive oil is objectionable because it is often rancid with age, and irritating in its nature. Adeps may carry animal poison. Castor oil is more lubricating, less irritating and of a vegetable origin. To smear the clean hand with clean soap is amply sufficient and without objection. Antiseptics may be applied to the hands for the purpose of cleansing them, but let soap be the vehicle or lubricant used in the vagina.

In making digital examinations to determine the condition of the parts on presentation and progress of labor we should be content to wait after this information is obtained without meddlesome interference. We should wait until the amniotic sac, if still intact, presses well upon the vulva. In spite of all our cautions and best endeavors we meet with cases which demand interference, and he is fortunate who knows just when and what to do; whose familiarity with instruments enables him to avoid delay and injury to mother and child. It is inexcusable in the obstetrician, if

his judgment tells him that the case is progressing without detriment to the mother or child, to insist upon applying the forceps, but, on the other hand, if exhaustion is threatening, he should act with firmness and promptness.

In the light of our science, how may we account for the present heavy death-rate in parturient women?

CLASS A.

First. Our girls are raised into bodily deformities, perverted sensibilities of the nervous system, and depravity of the blood state.

Second. Vitiated habits and customs which interfere with the functions of the body in general, and procreation and gestation in particular.

Third. A growing desire to avoid the burden which is imposed upon them by nature; and the pernicious practices of preventing conception and producing abortion.

Fourth. The unwillingness to undergo the tediousness which often attends what would, without interference, terminate in natural labor.

Fifth. The increased mechanical and pathological obstructions which are more frequent on account of some of the above named causes. Uterine flexions, fibroids, ovarian cysts, and uterine polypi.

Sixth. Infection with specific diseases. Gonorrhea of the endometrium and tubes.

CLASS B.

First. The meddlesome interference of untidy and unclean midwives.

Second. The readiness of some accoucheurs to yield to persuasion and convert what would be natural into artificial delivery.

Third. The converting of needful cleanliness and antisepsis into unnecessary and mischievous practices.

When should we make use of the douche in connection with labor, either ante-partum or post-partum?

CLASS A.

First. I would say not at all, if the woman has healthy secretions with natural delivery, followed by good uterine contraction and no persistent retention of blood-clots or placenta.

Second. In the ante-partum stage there is no demand for them only when the mucus is purulent in character or accompanied with specific micrococci.

Third. When the patient has syphilitic ulcers or chancroid.

Fourth. When foul matter from the exterior or fecal matter have entered and found lodgment in the vagina.

CLASS B—POST-PARTUM.

First. When any conditions in Class A exist.

Second. When from tedious or instrumental labor there is left behind lacerations, abrasions, blood-clots, offensive lochia, putrid infection.

Third. When we discover the presence of immovable blood-clots and retained placenta, and find it necessary to remove them with the hands or the instruments.

This brings me to an expression of my views regarding the present practice of curetting and washing out the cavity of the uterus in all cases of fever occurring three to fifteen days after delivery.

Such a universal practice as is now in vogue and advocated in the teachings of many obstetricians amounts to an exclusion of any trivial cause, and demands heroic efforts to anticipate what may or may not prove to be some violent form of infection having a nucleus in some foreign or removable substance in the cavity of the uterus.

My experience for twenty-five years warrants the belief

that only a small per cent. of the cases in which fever has occurred have been from malignant, putrid, or septic absorption, demanding the heroic treatment. Further than this, I am of the opinion that every obstetrician who adopts such a universal rule of this radical treatment, however careful he may be with asepsis and antisepsis, increases the risk of infection, and often converts milder into more malignant fever. It may be for this reason that such a practitioner is forced to report such a large per cent. of puerperal infection or septic fever.

Quoting from an article by Dr. C. Warrington Earle, Professor of Obstetrics of the Chicago College of Physicians and Surgeons, read at the International Medical Congress, 1887, at Washington, D. C., I can forcibly illustrate the danger of overstressing to students the need of surgical treatment. He says: "In every parturient woman whose temperature goes to 103° something should be feared." "I am free to admit," says the professor, "that we do occasionally have a temperature of 103° or 104° which is trivial and disappears in a short time. On the other hand, I do know that a great number of practitioners who try to convince themselves that the temperature is not due to septic influence, have these cases which last, with fever and sweats and prostration, for weeks and sometimes months. If the uterus of any woman whose temperature goes to 103° on the fourth day could be thoroughly washed out in a way which I shall describe, it is my belief that a very large number of them would have no more fever."

I would say diagnose your case, and treat it accordingly; and don't attempt to treat all cases as putrid infection or septicemia simply because you have a rise of temperature.

CLINICAL REPORT.

BY JOHN D. PAIGE, M.D., SAVANNAH.

I wish to present this series of twenty-six consecutive extractions of cataract, from the fact that in none of them was there any suppuration or infection of the wound. They are not a series of carefully selected cases, but were operated under all sorts of conditions, some of them very adverse, at the various houses of the patients, some in my office and some at the hospital. They include the extraction with forceps of three membranous cataracts, and one case in which both lenses dropped into the vitreous at the completion of the corneal incision and were extracted with the spoon, and one case where the corneal wound was reopened on the fifth day by an uncontrollable patient. The great clinics have at best four per cent. loss from infection, and I believe these twenty-six to have been free from it simply from the way the instruments were prepared.

L. G. c. l. Single extraction with iridectomy under chloroform at the office; walked home a mile, refusing to go to the free hospital, and living in a hovel; a. v., sees to do ordinary sewing, does not know how to read.

J. L. c. Double extraction with iridectomy, under cocaine at home; a. v. R. 6, L. 6.

M. L. B. l. Single extraction with iridectomy under cocaine at home; a. v., sews ordinary sewing; does not know how to read.

T. B. c. Double extraction with iridectomy, under chloroform at the office. Both lenses fell into the vitreous during the corneal incision; extraction with the spoon, no reaction; a. v., does shoemaking as before the development of the cataracts; does not know how to read.

Mrs. C. L. l. Single extraction with iridectomy, at home under cocaine. Slight delirium on the second day (aged 86) and so was placed in reclining chair; on the fifth day she arose, in spite of the usual directions, walked across the room, pushed a commode from one room to another, and took the blower from the fire. The wound was reopened by this but closed again with a callous; iridocyclitis of low grade lasted four weeks, when a discission of secondary cataract reawakened it; lasted a period of nine months occluding the pupil with membrane; discission gave a. v. 3.

T. F. Double simple extraction under cocaine at the office, followed latter by discission; a. v. R. 6, L. 6.

D. L. l. Simple extraction at the hospital under cocaine, followed later by discission; a. v. 5 R. One year later simple extraction under cocaine, vomited all night, prolapse of iris, drawn out and cut off; a. v. 4.

Mrs. R. Double simple extraction under cocaine at the hospital, followed later by discission; a. v. R. 6, L. 6.

Mrs. S. R. Simple extraction at home under cocaine, followed later by discission; a. v. 5.

S. F. R. Simple extraction at hospital under cocaine, followed later by discission; a. v. 5. Two months later had grippe with pain in the eye—a. v. 2. Tension increased; iridectomy—a. v. 5.

D. B. c. Double simple extraction at hospital under chloroform, after the R. was finished before the L. was begun profuse vomiting caused a large loss of vitreous. The L. was then done; a. v. R. p. l. L. 5.

C. W. c. This was a case of nystagmus and cataract with a long syphilitic history. Chloroform at the hospital, double simple extraction, followed later by discission; a. v. difficult to determine but guides herself about alone.

H. R. Single extraction with iridectomy under cocaine at home; cupped disc was found in spite of his previous good projection and absence of pain or high tension; a. v. $\frac{1}{20}$, which diminished.

S. R. c. r. Single extraction with iridectomy under cocaine at the hospital; a. v. good but undetermined, as the patient passed from observation.

J. R. l. Single simple extraction under cocaine at hospital; incarceration of iris; eccentric pupil—a. v. Threads coarse needle; does not know how to read.

J. C. l. Membranous cataract, no history of previous operation; extraction with forceps under cocaine at office; a. v. 7.

L. L. C. C. Double membranous cataract lenses, having been needled some months previously by another physician; chloroform extraction with forceps; a. v. 6.

A. H. c. l. Single extraction with iridectomy under cocaine, at home—a. v. Does not know how to read; threads medium sized needle.

The eyes are flushed as usual with four per cent. boric acid solution. The instruments lie in their case coated with vaseline. At the time of the operation this is wiped off with pledgets of absorbent cotton wet with alcohol; then they are wiped off in four per cent. boric acid solution and then wrapped (i. e., the portion of them destined to enter the eye), with cotton saturated with alcohol, from which they are withdrawn only at the moment they enter the eye.

"HAY FEVER."

BY E. VAN GOIDTSNOVEN, A.M., M.D., ATLANTA.

I have been a sufferer from hay fever for several years. Of its etiology I know but very little; of its treatment, still less. One thing I certainly know: It does not make a saint of the one who is afflicted by it. For further particulars I refer you to my friends, Drs. Giddings, Willis Westmoreland, and C. D. Smith. They know whereof I speak, and I apprehend it will be some time before their names and mine be presented for canonization. Henry Ward Beecher, who had hay fever, stated one day that it was an esthetic disease, afflicting only those who had brains, blood, and money. Inasmuch as these three essentials seldom, if ever, harmonize or correlate so as to constitute such a complete and most desirable atavism, I am truly sorry I cannot corroborate his statement as far as I am personally concerned. The most widely prevailing doctrine of the present day, respecting the origin of disease, is that of the "germ theory"; yet, it cannot be controverted that there are many forms of disease, which are, *per se*, *autogenetic* and derivative of certain states of lowered health, which are induced by visceral affections.

But what of those subtle forces incessantly at war, intangible, imponderable, imperceptible agencies, the one building up, the other destroying, not *material substances*, but rather *conditions of matter*, which man can neither create nor destroy, visible only in their manifes-

tations, cataclysms, and survivals, perpetually existing, unchanging in quantity, yet ever changing in form? Compared to these, microbes and ptomaines play a very insignificant rôle as etiological factors.

Yet, I cheerfully and irresistibly subscribe to the germ theory, and firmly believe hay fever to be a microbic disease. There arises every calendrical fall from the highlands of Africa a most violent current called sirocco. It is a hot, dry, dust-laden wind. During its prevalence persons suffer from great lassitude and exhaustion, and vegetation in Africa and contiguous coasts is parched and burned. This sirocco sweeps over seas and oceans. Its strength and violence are greatly modified before it reaches our shores. Nevertheless, the current is most keenly felt by neurasthenic people. To them it is most tangible. An inexpressible sense of malaise overwhelms them and migraine is one of the most common manifestations. Who has not heard of the baneful influence of east winds in autumn? I am strongly imbued with the conviction that this current is laden, not only with dust, but with a morbific agent, with a disease germ, either cryptogamic or microbic. I believe that this germ thrives only in certain zones, not unlike the isothermal lines, and that the atmosphere of some altitudes, like that of Roan Mountain, N. C., and others, destroy it. I am informed that the sway of this current stops at the Rocky Mountains, and that the Pacific coast is free from hay fever. I am rather partial to the microbic theory, because I do not think that cryptogams are as much affected by cold as the animated germ or microbe.

As I have stated above, neurasthenics are alone subject to hay fever. Hence the immunity of the great majority of mankind to this morbific agency. There must be a neurotic diathesis, a predisposition, or, as biologists

call it, a neurotic pabulum or soil before the microbe sets in and claims squatter sovereignty. The symptoms of hay fever are, in my humble opinion, but reflex actions due to irritation of Meckel's or spheno-palatine ganglion. Itching of the inner canthi, profuse lachrymation, profuse nasal secretion, frequent sneezing, itching of the palate and velum palati; of fauces, pharynx, posterior nares, and Eustachian tubes; and, finally, dyspnœa, are well known concomitants of the disease.

Meckel's ganglion supplies all these areas through the ascending branch which passes through the orbit, the descending branch through the palate, the internal branch through the nose, and posterior branches through the pharynx. I think the invasion takes place through the air passages, and, in an afferent way, irritates the spheno-palatine ganglion; and the latter, in return, through its sympathetic plexus, affects the sensitive areas above mentioned.

Neurasthenia, as a disease, cannot be cured. The predisposition, therefore, remains the same. At each recurrence of the invasion the patient is inevitably attacked *de novo* and with renewed energy.

Hence, I do not think that there can be a cure for the disease. I do not believe that the removal of a deflected septum or portion thereof, or the obliteration of any other sensitive area are curative proceedings.

The treatment, as applied by Drs. Brown and Campbell of Atlanta, is eminently palliative, and has afforded me the greatest relief I have had in years. Through their skill and kindness, I have this year been able to attend to my professional duties in a much more satisfactory manner than heretofore.

The microscope has proved to be the greatest bloodhound of the age. Pasteur, Koch, and San Domingo Freire are our modern heroes, and their names are in-

delibly engraved in the annals of medical lore and in the hearts of their fellow-men. But their unravelings have failed, so far, to verify the old saying that, "to point out the cause is to point out the cure."

To propose or to claim a cure for yellow fever, cholera, tuberculosis, smallpox, hay fever, etc., etc., is a quixotic assumption. One might as well throw a glass of water into Vesuvius or defy a cyclone with a popgun! There is no safety but in immunition, hygienic measures, and in most cases a masterly retreat.

Immunition is the remedy of the future. We are gradually, but surely and irresistibly, driven thereto by its preponderating and self-asserting claims.

Believing, as I do, that micro-organisms constitute the *fons et origo* of hay fever, I cannot but feel impressed with the conviction that the day is not far distant when the bacillus of this disease will assert itself, and its attenuated culture will be used to immunize, *secundum Pastoris ordinem*, those unfortunate neurasthenics who, like myself, are subject to its renewed attacks and diabolical influenza.

Hay fever! Influenza! What technical expressions in this new era of medicine! How scientific, graphic, descriptive and suggestive a name for a neurotic disease! It reminds me of what Ingersoll says of clergyman's sore throat: "I call it Parsonitis. It's something auctioneers never have."

THE MANAGEMENT OF HEMORRHAGE AFTER TONSIL OPERATIONS.

BY A. W. CALHOUN, M.D., L.L.D., ATLANTA.

An occasionally alarming hemorrhage after tonsil operations, with a sometimes fatal result, makes this a subject of exceeding interest to the surgeon. Such accidents should not, however, stand as obstacles in the way of performing these operations, for the necessity for operating is both frequent and urgent. Especially in children is the enlarged or hypertrophied tonsil very often met with, and the evil effects of the disease are so apparent to the medical, and even non-medical observer, that it often calls for prompt action on the part of the physician. I do not intend here to enter into a discussion of the disease itself, but I would say, that within the range of surgical diseases, I do not know of any affection that so often produces a train of more distressing symptoms than a typical case of enlarged tonsils; nor do I know of any operative procedure that gives more decided or permanent relief than their proper removal.

The ordinary hemorrhage following the operation is of but small consequence, as, with a little patience and care, the blood soon ceases to flow of its own accord, or, if need be, a gargle of cold salt water suffices to arrest it in the course of a few minutes. But when there flows from the cut surfaces a steady stream of blood, continuing for hours, and when the frightened patient becomes each moment weaker and more nervous and more difficult to manage,

then it is, that the tact and nerve and skill of the surgeon display themselves to the greatest advantage. A typical case of profuse hemorrhage from an operated tonsil, uncontrolled by the ordinary remedies and means, is an experience that no doctor will willingly confront the second time. Fortunately these very severe hemorrhages rarely occur, but they *do* occur, and the operator should be prepared to contend with them at any time. This operation is chiefly necessary in children from three or four to ten or twelve years of age, and with an experience of over 3,000 tonsil operations I have seen but few cases of alarming hemorrhage in children.

The inference, therefore, is that young children are not very liable to dangerous hemorrhage—which, for obvious reasons, is a fortunate exemption. But it is in the adult that the great danger lies, because of the hardened tissue of the gland and the increased number and size of the blood vessels, over that of the child.

Generally, the tendency to serious hemorrhage manifests itself immediately after the operation, or, at farthest, after a few hours. In one of my cases, however, secondary hemorrhage occurred five days after the operation.

There can be no objection to the trial of the various styptics, for they do in some instances arrest the flow, but they, too, often fail, and, even when successful, they leave behind most unpleasant results.

The actual cautery applied directly to the bleeding surface has been recommended, but the objections to its use are so obvious that I could not suggest it. But I can confidently recommend *compression* as a remedy. Pressure directly applied to the wound is the most satisfactory of all means. Pass the forefinger, the end of which is covered with a piece of moistened sponge, or absorbent cotton, into the mouth and carefully cover the cut surface, and with the wound between the forefinger of the one hand and the

palm of the other hand placed externally, exercise a gentle but steady pressure. The hemorrhage ceases immediately, but recurs upon the removal of the pressure. It is now a matter of courage and confidence on the part of the patient, and of physical endurance on the part of the doctor. In most cases, pressure continued for ten minutes to one or two hours suffices to permanently arrest the hemorrhage, but in rare instances it must be continued through twelve to twenty-four hours. In these last cases assistance must be called in, so that the person exercising the pressure can be rested at intervals of half an hour. But I have never known this mode of checking the hemorrhage to fail and I can unhesitatingly recommend it to any one having such a case.

I read a suggestion in some medical journal not long since, which I am inclined to think has some merit in it, though I have given it no trial: that is the hypodermic injection of small doses of apomorphia, with the view of inducing nausea, which is supposed to exercise a beneficial effect in lessening the hemorrhage. It is worthy of a trial, for I know by experience that extreme nausea bordering on fainting, or actual syncope itself, will arrest the hemorrhage. Before learning to rely so implicitly upon compression, I recall several cases in which the nausea, on account of the loss of blood, fright, and nervous shock, became so intense as to be in itself alarming. In three of these cases, after unsuccessfully trying every remedy at my command, and when death seemed imminent, syncope followed (in one while lying in bed), and instantly the hemorrhage ceased and did not recur upon reviving the patients.

But since I have learned what an infallible remedy the compression is, I have had no such bad cases as just mentioned. If the pressure is properly done, and continued long enough, a fatal result cannot ensue.

DISCUSSION ON DR. CALHOUN'S PAPER.

Dr. J. M. Hull of Augusta: I have listened with a great deal of interest to the paper which has just been read by Dr. Calhoun, and I must say that I have had one or two cases of rather embarrassing hemorrhage, though I can recall no case which caused a feeling of apprehension. After a couple of hours the hemorrhage was entirely controlled. My own experience and my reading lead me to the conclusion that the doctor suggests. We never apprehend serious hemorrhage until along toward the twentieth year, or even later. We know that just in proportion as the patient is advanced in years that the chances for hemorrhage following the removal of the tonsils are materially increased in frequency, extent, and duration, and the pressure theory advocated by the doctor will result invariably in relief, if, as he expressed it, a man will hold long enough or has sufficiently competent aid. I have had one or two experiences in the line of excessive hemorrhages, and in a vast majority of cases these hemorrhages have occurred immediately following the removal of the tonsil, and in all cases beyond sixteen years of age I have resorted to the use of the snare, and not the tonsillotome. I would like to ask Dr. Calhoun what instruments he uses.

Dr. Calhoun: I use the knife and forceps.

Dr. Hull: When I first started to use the snare I found it sometimes difficult to manipulate, and I had the misfortune to break several. Since then I have succeeded in having an instrument made of my own design for the removal of the tonsils which is sufficiently strong and large to enable me to perform the operation without this annoying complication. I am sorry I did not bring the instrument with me to show it to you. I have used it in upwards of one hundred and twenty cases, if I mistake not, in patients who have passed sixteen years of age, or who, prior to that time, never had an unpleasant experience with removal of

tonsils. The snare I speak of is made by Tiemann & Co. of New York. Since I have adopted the use of this snare and performed at least the number of operations previously mentioned, in not a single instance have I had any serious or embarrassing hemorrhage. This fact is worthy of observation. I have never had a fatal case of hemorrhage following tonsillotomy, although I am aware that there are a number of cases on record. Furthermore, an instrument has been devised for arresting hemorrhage after removal of the tonsils, which consists of a pair of hemostatic forceps arranged after the pattern of Bosworth, but I do not think such instruments have proved satisfactory. The snare I speak of can be used without the slightest fear of breaking; the tonsil can be removed without a great degree of force in as short a time as is consumed at the present time by other means. It is absolutely without danger, and I recommend it to you as a safe and sure method.

Dr. J. H. Shorter of Macon: I was very much interested in listening to Dr. Calhoun's paper, and also the remarks that were made by Dr. Hull. Delavan, I think, reported a case that he had lost in a child, who was one of a family of bleeders.

Dr. Calhoun: How old was the child?

Dr. Shorter: About six or eight years of age. He did not know the disposition of the child. This child might have died from having a tooth extracted. A case is reported where a child died from hemorrhage after extraction of adenoid growths. I make it a rule to inquire into the history of all patients in order to find out whether there are any members of the family who are bleeders, and if they say not, then I go ahead and remove the tonsils. In children we do not fear hemorrhage, but it is only in the adults that we are liable to encounter it to an excessive degree. Where a tonsil is enlarged and apparently solid and

has a homogeneous surface to it, I always feel apprehensive about attacking it with a knife or tonsillotome. Sometimes I do it, but I generally remove them with the galvano-cautery, which is a safer plan, or I have also removed them in one or two instances with the snare. The experience which Dr. Calhoun relates is certainly most valuable to us, and more particularly the plan he recommends for controlling the hemorrhage after the removal of the tonsil. There is hardly anything more terrible in the experience of a surgeon than to have death occur from hemorrhage from this operation, and which the friends might think was not absolutely necessary. I suppose in the case of malignant disease for which an operation was performed, if the operation was followed by a fatal result, or the patient died from hemorrhage, it might be regarded as a dispensation of Providence, but to have a person die from an operation so simple as the removal of the tonsils, it might condemn the surgeon forever. After removing the tonsil, even in a child, I do not let the child leave my office for an hour or two thereafter. In the case in which Dr. Calhoun speaks of hemorrhage occurring five days afterwards, I suppose there must have been some atheromatous degeneration.

Dr. Arthur G. Hobbs of Atlanta: Whenever a case comes to me for removal of the tonsils I ask the patient about his age, the diathesis, and the atheromatous condition. I have made something like three or four thousand tonsillotomies, and I have never seen a case of profuse hemorrhage that terminated fatally. If the hemorrhage is very profuse and lasts too long it would frighten me. During the last five years or more, if I had a case to deal with in which the hemorrhage continued too long, I would bring on a faint by spraying cocaine in the nose or throat, wiping it out, and then lay the patient down. I do not remember any case that I have had during the last six or

seven years that has presented any untoward symptoms. As to the particular age of sixteen, eighteen, twenty, or thirty, whenever patients with large tonsils come to me, no matter what the age is, I look upon such tonsils as foreign bodies just as much as a wart upon the hand, and it must come off. If I find a hemorrhagic diathesis, I would be a little more careful and perhaps hesitate to remove the tonsil. I have never had a case that I can recall that gave me a second thought as to hemorrhage. In case hemorrhage occurs, I would endeavor to stop it either by pressure or by bringing on a faint, and during the last six or seven years I have induced a faint by the used of cocaine. I cocainize my patients up to the fainting point, then lay them down on the side and let the blood run out, but of course using all the other means, such as pressure, styptics, etc. I have not resorted to the galvano-cautery. As previously stated, when the tonsil is large it does not matter with me what the age of the patient is, when I see it I look upon it as a foreign body and remove it. I have never seen a tonsil that was greatly enlarged and hypertrophied. I have seen some that were soft and hyperplastic that I thought I could have reduced in some way. It takes but a minute or so to clip it. After adolescence I have used a long knife with curve, but in children I resort to a quicker means—using the tonsillotome of Matthew with or without the vulsellum, or in some cases I have used Mackenzie's guillotine, but it is not the best instrument because it does not catch the tonsil as it falls, and you have to keep it from being swallowed or drawn into the larynx.

Dr. Dunbar Roy of Atlanta: The subject which has been presented to us by Dr. Calhoun is a very interesting one indeed, especially to those who do a good deal of this work. Dr. Calhoun's paper has simply dwelt upon the best way of controlling hemorrhage after the removal of

the tonsils. It is not the question as to the method of operating, or whether it is necessary that the tonsil should be removed, but simply the best method of arresting hemorrhage. I believe myself, with Jarvis of New York, as to hemorrhage, it does not depend so much upon the age of the patient as upon the character of the tonsils to be removed. He divides them into the soft or mucous, and the hard or scirrhous. When we have a scirrhous tonsil to deal with, one that is hard, we are liable to have hemorrhage following its removal; but in the soft variety we do not encounter that danger so frequently.

There are one or two points which I have learned in my short professional career that have proved to be valuable, and one is this, that after I remove a tonsil, I make the patient shut his mouth and spit only when the blood wells up, without opening or gargling it with a styptic, ice or cold water. I do not have the patient open his mouth nor look to see how much the tonsil is bleeding. If you do that, as a rule, in a few moments thereafter you will find that the sputum will become tinged with blood, and in a short time the hemorrhage will cease.

In regard to styptics there are none better than that which is recommended by Sir Morel Mackenzie, which consists of a saturated solution of gallic acid and tannic acid in water, using a drachm of gallic acid to half a drachm of tannic acid in one ounce of water. It can be used as a styptic in order to produce coagulation of the blood. In giving a patient water to wash his mouth out with, he washes out the clots which have formed in the little openings in the tonsil, and by so doing you are taking away the focus which is going to aid you in stopping the hemorrhage.

In regard to compression, there is no better remedy than it. It is one which I resort to frequently when I find it of necessity to stop hemorrhage, and the pressure I find

is best made by taking a large piece of cotton and putting it on the end of a laryngeal hemostatic forceps and pressing it right into the point of the tonsil from which the blood flows, and then I do as Dr. Calhoun has suggested, namely, have an assistant to keep up pressure.

I brought back with me from Vienna an instrument which is the outcome of Professor Schraelter's work, and it consists of a double clamp which can easily be removed. On one side there is a bulbous portion to which can be attached a little piece of cotton, and over this a hard rubber ball which can be placed on the inside and attached to the other portion of the instrument and compression made on the outside, and the patient can close his mouth. You can leave it for twenty-four or thirty-six hours without being compressed with the hand. I have never resorted to it, though I have seen it used in Vienna, and I found it satisfactory. I have the instrument in my office ready for use whenever opportunity presents itself.

In regard to the removal of the tonsils, that is another question. Harrison Allen, of Philadelphia, who is one of the best comparative anatomists we have, has written one of the best articles I have ever read on the histology of the tonsil, and as to how the tonsil should be removed, and what is its function.

Dr. Wm. A. Love of Atlanta: I wish to ask Dr. Calhoun one question. We know that in some cases considerable difficulty is experienced in arresting hemorrhage after tonsillotomy. I have not seen or heard of the instrument that has been referred to by Dr. Roy, but the thought occurred to me that an instrument might be constructed and regulated by a screw to keep up compression without inconveniencing the patient for a considerable length of time. I would like to ask Dr. Calhoun if he thinks such an instrument could be constructed?

Dr. Calhoun (closing the discussion): I have not attempted in the paper I read to say anything about the mode of operating, or the instrument used for such operations, but I simply dealt with how to control hemorrhage after tonsillotomy. Men in doing this operation use different instruments from time to time, but I operate with a vulsellum and a probe-pointed knife.

One year ago to-day, when this association was in session in Atlanta, I went to see a case for the purpose of removing the tonsils. Dr. Shorter was present at the time and knows something of the case. I operated on April 16th, and the patient afterwards bled copiously. I thought I had the hemorrhage under control, and after working for an hour turned the case over to my assistant and went down to the Association Hall. In about an hour thereafter I was sent for, and when I got to my office I thought the man was dead. He looked to be a corpse, but in a few moments we succeeded in reviving him. Just as I had entered the room he fainted. As is usual in these cases the hemorrhage ceased immediately; upon the administration of whisky the patient was brought around, and had no recurrence of the hemorrhage. These instruments do not amount to much, and I have, therefore, learned to rely upon compression with my finger. When a patient bleeds longer than ten minutes, I cover my finger with a small piece of wet absorbent cotton, pass it into the mouth over the cut surface, making pressure there for a minute or two. This method is so satisfactory and simple that in the course of ten minutes or so the bleeding will stop. I have had two or three cases of copious hemorrhage in children, but it so seldom occurs with this class of patients that it is not to be looked for. However, it does occur every now and then. If it occurs in children it is a serious thing, and we cannot exercise the same means that we can in the adult. But compression is so simple that we do not need anything else.

Replying to Dr. Love's question, I would say that if we could get an apparatus, when rightly applied, that would act promptly in the control of hemorrhage, it would be *par excellence* the remedy, but, in my experience, instruments used for this purpose are very unsatisfactory.

A REMARKABLE CASE OF RUPTURED ECTOPIC PREGNANCY—LATE OPERATION—RECOVERY.

BY GEORGE H. NOBLE, M.D., ATLANTA.

On account of the complications and the contingency successfully met, this case is presented as one of interest. She was a woman twenty-five years of age, mother of four children, the youngest two years. Had had two abortions, the last three years since, menstruation normal. The last two months, however, it did not appear. For the past four weeks she has had some nausea, and occasional vomiting, with pains in the back and abdomen.

For the week preceding her admission to the hospital, she had sharp pains in the lower part of the abdomen, and on the night before her admission, they were accompanied by nausea, vomiting, and cold sweat. The following day there was dullness in the hypogastric region, tender on pressure; pulse 100, quite weak; temperature $98\frac{1}{5}°$. At intervals of a day or so the pains were repeated with a gradual increase of dullness, until a prominence appeared in the hypogastric region, which was mistaken for a distended bladder. The temperature ranged from subnormal to a slight increase above normal, the circulation growing weaker and the surface paler. Such was the history prior to the time I first saw her.

On inspection, I found that the prominence in the hypogastric region had extended upward to within two inches of the umbilicus and laterally a little beyond the central

portion of the inguinal region upon either side, which taken in connection with the history and the character of the circulation, suggested ruptured ectopic pregnancy. Preparing to examine *per vaginam*, I was informed that she was menstruating, but feeling assured that it was a metrostaxis, and explaining the same to the attendants, I confirmed the diagnosis by outlining the lower portion of the immense clot in the abdominal cavity. I advised an immediate operation, but through some misunderstanding she was not placed in my charge for about forty hours, at which time the blood-clot had extended to a point two inches above the umbilicus, with a regular rounded outline, distending the abdomen fully as much as a six and a half months pregnancy. The circulation was very weak and the temperature below normal. By the time preparations were completed for the operation the outline of the mass of clots had changed; a projection or protuberance about the size of a No. 250 orange appearing on its margin in the left hypochondriac region.

The operation was done on the tenth day after the primary rupture. The incision passed through a gangrenous patch of peritoneum about two and a half inches in diameter, which could be easily removed by sponging. The omentum immediately beneath it and overlying a very firm portion of the clot was uninjured and not adherent to the abdominal wall, though firmly attached to the uterus, upper margins of the broad-ligament and brim of the pelvis. After releasing it, both broad-ligaments were clamped, as it was impossible to determine without loss of time which side the hemorrhage came from on account of the mass of adhesions and clots.

Above the mass of clots was sacculated by agglutination of the intestines, except at the point described as a protuberance, where the gestation sack was found completely severed and lying loose in the left hypochondriac region.

After cleansing the cavity and separating the adhesions, a surface as large as my two hands upon the coils of small intestines was raw and bleeding. A spot about the extent of sixteen square inches on the descending colon was perfectly black, being in a very low state of vitality, and just below it was another place of equal size of a dark green color, while in the pelvis no healthy peritoneum was left.

After liberating and tying off the appendages the clamps were removed. Upon the right side there was softening of the ligament, which, with the pressure of the clamp and tension of the ligatures, caused the broad ligament to slowly tear away from the uterus to a point below the internal os. This was a feature altogether unexpected, and the woman being in a precarious condition, having lost before the operation blood enough to destroy the life of two persons, made the situation rather serious.

The bleeding ligament was tied in two sections, but the margin of the uterus was so friable that ordinary measures of hemostasis were impracticable. I was, therefore, brought face to face with a hysterectomy in a woman whose pulse was 160 per minute and very feeble, even under vigorous stimulation. As ideal surgery is not always the best surgery, the quickest and shortest way out of the difficulty was adopted. The uterus was drawn up out of the wound, encircled with an elastic ligature, transfixed with "scure" pins and cut off below the internal os (retraction of the bladder from the constant upward displacement enabling it), and anchored in the lower angle of the wound by a running silk suture, all in less than two minutes. At this juncture forty-eight ounces of salt solution were thrown in the median basilic vein before its effect became perceptible upon the pulse. The operation was then completed by gauze packing to keep intestines out of the raw pelvis and a rubber tube under the gangrenous peritoneum. She was kept upon the table and surrounded by artificial heat and

stimulated until pulse came down to 140, when she was transferred to the bed. Under active stimulation, she made a good recovery. The stump came away in fourteen days, and the wound healed without any evidence of weakness in abdominal wall. In the outset hysterectomy was not desirable, the uterus not being sufficiently diseased to require it. The appendages on both sides, however, were sacrificed, on account of the mutilation necessary to liberate them from the extensive adhesions.

As to the method of removing the uterus, it was not an ideal one, but the only one admissible under such circumstances. The time necessary to have done a complete hysterectomy or an intra-peritoneal stump, would have cost the patient her life; hence a life-saving method, instead of an ideal or fancy operation was employed. It was so complete and yet so free from "fuss and feathers," that a friend remarked, "there was nothing done that could have been left undone, and nothing left undone that could have been done, without sacrificing the life of the patient."

CANCER OF THE PANCREAS, WITH REPORT OF CASE—AUTOPSY.

BY VALENTINE H. TALIAFERRO, M.D., ATLANTA.

In the spring of 1894 I went to a neighboring city to see a lady, the wife of a physician, who was supposed to be suffering from cancer of the stomach, this diagnosis having been made by several prominent physicians. From the history given me by the patient, and the physical signs which were obtainable, I readily arrived at the same conclusion, and diagnosed cancer of the pylorus with dilatation of the stomach.

For many years previous to the time of my visit she had suffered from gastric and intestinal troubles which had been gradually growing worse, until a few months before I saw her, when she had begun to rapidly fail.

After a careful examination I made the following notes:

Inanition, emaciation, and characteristic symptoms of internal malignant disease; great pain after the ingestion of solid or liquid food, with occasional vomiting of large quantities of undigested food and mucus. A spot of pain in the back just to the left of the vertebral column and under the scapula; constriction of the pylorus with dilatation of the stomach; obstinate constipation alternating with diarrhea.

No malaria in the stools; a small, hard, freely movable tumor in the pyloric, zone through which gas gurgling occurs upon manipulation; forceful pulsations of the aorta communicated to the tumor; probable dissemination to lungs and liver.

So rapidly was this patient starving and so great was her suffering, that I advised operation with a view of resecting the pylorus if practicable or at least doing a gastro-duodectomy to enable the stomach to empty into the intestine. This, however, was rejected, so a soft rubber siphon was ordered for daily lavage of the stomach, which, for a time, gave great relief. She died a few months after I saw her. With the assistance of Drs. Wright and Evans of Covington, I made a *post mortem*, and to my surprise found a primary cancer of the head of the pancreas, which had greatly infiltrated the surrounding tissues, had extended to the duodenum, completely surrounding the gut close to the pylorus, causing great constriction at this point, producing the misleading symptoms which were prominent in this case.

In endeavoring to arrive at a positive diagnosis I had given careful consideration to the conditions with which cancer of the stomach could be easily confounded. But with a tumor so superficial in the region of the pylorus, with dilatation of the stomach and evident constriction of its outlet, pronounced pain and other minor symptoms of cancer of pylorus, with the absence of marked jaundice, stearrhea, and glycosuria, I thought I could safely diagnose cancer of the pylorus.

Early evidences of disease of the pancreas are so similar to those of surrounding structures that we are confronted with serious difficulties when we would differentiate.

I briefly report this case because lesions of the pancreas are rare, symptoms of disease obscure, and diagnosis difficult or impossible; also with the view of directing attention to the study of solid tumors of this viscus.

The paucity of literature on this subject is evidence of the fact that little is definitely known concerning malignant growths of the pancreas; hence all authenticated cases should prove of interest.

Solid tumors of the pancreas, though rare, occur more frequently than is generally supposed. In 11,472 *post mortems*, by Segre, and reported by Ostler, there were 132 tumors of the pancreas. Of these 127 were carcinomata, 2 sarcomata, 1 syphiloma, and 2 cysts. Thus we see that with rare exceptions solid tumors of this organ are carcinomatous.

In cases of doubtful diagnosis, where a tumor is present in the pyloric zone, cancer of the pancreas should be borne in mind. Small tumors of the pancreas are very difficult to palpate, owing to their deep situation, but in emaciated individuals the normal pancreas can often be palpated; also the pylorus, but neither of these are likely to be taken for new growths.

Those of you who are prepared to make accurate chemical and microscopical examinations find less difficulty usually in arriving at correct conclusions and distinguishing between cancer of the stomach and surrounding organs. But there are some points I would mention which are characteristic, discernible to the naked eye, and will aid in discriminating between these conditions.

In all lesions of the pancreas which are sufficiently advanced to interfere with its normal physiological functions, intestinal digestion is so seriously affected that rapid emaciation occurs. The absence of the pancreatic ferments leaves totally undigested all fatty substances which appear in the stools. Stearrhea, though not always present, is a valuable sign. Glycosuria also is present in a majority of cases. Pain and discomfort will be found to be an early sympton. It is caused by compression of the celiac axis, is neuralgic in character, and when the stomach is not involved is unaffected by the ingestion of food.

When the neoplasms attain sufficient development for physical detection, they will be found deep-seated and with little mobility. Pulsations of the abdominal aorta are com-

municated to the tumor with distinctness, owing to its proximity to that vessel.

The ductus communis choledochus is pressed upon when the neoplasm is in the head of the pancreas and of sufficient size, and early gives us one of the most constant symptoms—obstructive jaundice.

Extension of the disease to adjacent organs masks the real symptoms by causing those of other maladies.

It is important that we learn to recognize this disease in its incipiency, that we may take radical measures for its cure. In the advancing state of abdominal surgery there is no reason why these malignant tumors, which prove so rapidly fatal, cannot be dealt with with the same success and confidence that similar tumors of internal organs are approached. But it is not now my intention to go into the treatment of these lesions.

SCOPOLAMINE AS A MYDRIATIC.

BY ARTHUR G. HOBBS, M.D., ATLANTA.

This new mydriatic is being tested now by some oculists, especially by those who are in charge of large clinics where it can be conveniently alternated with atropia, homatropia, etc., and the results compared. It seems at present to occupy a middle ground between atropia on the one hand, which is known to produce a complete paralysis of the accommodation and retain its effects for a week or ten days, and homatropia, which is claimed by some, and denied by others, to effect a complete control of the accommodative muscles and retain its effects only twenty four hours. In the first case the time necessary to accomplish a full paralysis ranges from three to four days, and in the second only sixty to ninety minutes, according to its advocates.

Scopolamine requires about one to one and a half hours, with intervals of ten to fifteen minutes between the instillations, according to my observations, to bring about the desired results, and so far as I have been able to decide by comparative tests, the full effect is then reached quite as completely as that produced by a three days' use of atropia. Its paralysis lasts from two to three days, so it occupies a place between these two leading mydriatics, both in the time of reaching its maximum effect and in the time of its complete decline. The above comparison is based upon the assumption of the advocates of homatropia, that this drug produces a

complete relaxation of the accommodative muscles in one to one and a half hours, the truth of which I am not yet fully prepared to accept. In the same proportion that atropia is used, in a one-half to a one per cent. solution (approximately two to five grains to the ounce), and homatropia in a one per cent. solution (about four to five grains to the ounce), so scopolamine is used, as a rule, in solutions of two to five grains to the ounce, although now I prefer it in weaker solutions. It should be dropped into the eye at intervals of ten to twenty minutes until four or five instillations have been made, when it may be assumed that complete paralysis of the accommodative muscles has been reached.

It has served me thus far in such refractive tests that have required complete paralysis of the accommodation quite as well as atropia, and while it does its work much more quickly, its decline is at most only about one-fifth and oftener one-sixth of the time required when atropia has been used. (Homatropia would be the mydriatic, however, if we could become convinced that it effects a complete paralysis of the accommodation in an hour, or even in twice that time, since there can be no question of its more rapid decline.) Scopolamine produces no unpleasant effects in the throat, and it allows a possible accommodation within a day and a half or two days after its instillation, although the pupil may not become normal for a day or two longer.

Great comfort may be extended to the patient, particularly if he should be a business man with few hours to lose from his work, by prescribing a weak solution of eserine (one-eighth grain to the ounce), in order to more rapidly reduce the size of the pupil and indirectly aid the restoration of accommodation.

Some have asserted that scopolamine does not increase intra-ocular tension, but its use has not yet been

sufficiently extensive to fully warrant this statement. Should this be true, scopolamine would possess a great advantage over atropia, especially in older subjects. In some phlyctenular forms of keratitis, as well as iritis, when occurring beyond middle age, it seems particularly efficacious; indeed, I have already learned to place more confidence in it and feel safer when using it in such cases. Although it is much less expensive now than when I first began its use, about one year ago, its cost still restricts its general use.

We may hope that the consensus of opinion will, in a year or two, furnish us with a more accurate knowledge of this drug, to indicate to us when and in what case it is preferable to atropia or homatropia.

It is my opinion that it will in many cases supersede the first, and entirely supplant the last, unless homatropia should prove itself equal to the occasion now claimed for it. In this latter case homatropia would supersede both atropia and scopolamine for refraction work, and leave for it a very narrow field of usefulness. Since the contingency still exists, however, we may continue to use scopolamine, particularly where we fear atropia, as well as in refraction work.

I have a feeling based upon my short experience in the use of scopolamine, that there is something more for us to learn about it as a mydriatic.*

April 10, 1895. P. S.—In this day and age it is quite popular for the laity, through ignorance, to scoff at the uncertainty and impotency of drugs; hence my *subject—Scopolamine as a Mydriatic*—assumes an importance from a therapeutic standpoint beyond the restrictions that its caption would indicate, because it most positively refutes the assertion that "no drug can be relied on, and that all are uncertain."

* The above was published in September, 1894.

Those of us who daily deal with the eye from a refractive standpoint are constantly reaching out for an agent to convert this organo-physical organ into a purely physical one, like the camera-obscura of the photographer; in other words, to suspend the accommodation. We have long had an agent in the sulph. of atropia that admirably performs this function, but it requires three, or at least, two days to reach this end, and ten days or even two weeks more of long and tedious waiting for it to relax its hold. So if we can accomplish this result by the use of another agent within sixty minutes, and its complete decline in two or even three days, we will save many hours to the busy patient. I think I can now unhesitatingly say that scopolamine hydrobromate is that agent.

The above paper on scopolamine was based mainly on what I learned of it in my refraction room during the first half of 1894. Since which time Dr. Patterson has come to my assistance, and together we have learned much more of this wonderfully potent drug. We have used it in our refraction room almost exclusively in cases where atropia was not particularly indicated, during the last eighteen months, and we find it in some very important particulars a more desirable agent than the other popular mydriatics: 1st in the small dose necessary; 2d in the few minutes required to produce complete paralysis of accommodation; and 3d in the comparatively short time of its decline. At first we used the stronger solutions of one-half and one-fifth per cent. but more recently we have used the weaker solutions of one-tenth, one-twentieth, one-fortieth, and one-eightieth per cent. By all the comparative tests, the latter prove as effective, and the results are equally as reliable as those produced by the stronger solutions, or by either atropine or homatropine.

We have used a week solution in some cases of glaucoma, with very small pupils, in the early stages, in order to more thoroughly examine the retina. We ran the risk in these cases, because in no instance had we ever been able to observe any increase in the tension after the use of scopolamine. This effect did not follow in either of these cases, but on the contrary, one insisted that the characteristic deep feeling of pressure was relieved by each instillation, more than when eserine was instilled. Great care should, however, be exercised in putting this drug into a glaucomatous eye, until we more fully understand its great potencies. In all cases solutions of this drug should be dropped on the cornea with the head reclining towards the temple side of the corresponding eye to avoid drainage into the nasal duct. A one-half or one-fifth per cent. solution may produce a toxemia if such care is not observed. The toxic symptoms are expressed in low mutterings with a blank expression of the face. In all muscular movements co-ordination is impaired. There is more or less staggering in walking, at times similar to alcoholic intoxication, though no uncertainty is manifested as in locomotor ataxia the result is a surprise. The senses seem to lose the position of objects in space; the fingers grasp at an object and fail to find it, yet appear to possess it. This inco-ordination is closely allied to subsultus tendinum. Not many other symptoms show any close resemblance to alcoholic intoxication. Memory is sluggish and often seems entirely suspended, perception of the immediate surroundings is dulled, though the wits are sharpened, and sometimes there is a decided tendency to hilarity throughout the whole toxemia. These symptoms may last from four to six hours, unless stimulants are administered during the time. Opium and whisky are

antidotal, and when resorted to early cut short the toxic effects. Any solution stronger than a one-fifth per cent. should be used with great caution.

In some cases of iritis when atropia has failed to produce sufficient dilatation of the pupil, we have found that solutions of scopolamine have accomplished the object. In older subjects, with iritis, such advantages can scarcely be overestimated. We have had some further experience in its use in keratitis, and now would use it with still greater confidence than in the first cases.

The following few cases are from our refraction book :—

November 24, 1894; N. A.; aged 10; R. & L., 20/15.

Scopolamine, two instillations, one drop each of a one-fifth per cent. solution at intervals of fifteen minutes. Test made one hour after first instillation.

R. & L., 20/70 = 20/15. W + 75 + 50 C. Ax. 90.
November 26. R. & L., 20/20 = 20/15. W + 75 + 50 C. Ax. 90.
R. Jeager No. 13. L. Jeager No. 14.

November 27. R. & L. Jeager No. 1.
Ordered + 50 C. Ax. 90, both.

December 1, 1894. C. G. B.; aged 30.

R. 20/30 = 20/15. W + 1 + 50 C. Ax. 180.
L. 20/20 = 20/20. W + 50 + 50 C. Ax. 180.

Scopolamine, one-fifth per cent., three instillations of one drop every fifteen minutes. At the end of one hour the test, which was repeated several times during the day without variation, was :—

R. 20/200 = 20/15. W + 4 + 50 C. Ax. 180.
L. 20/50 = 20/15. W + 1 + 50 C. Ax. 180.

On the fourth day accommodation was restored.

Ordered: R + 3.50 + 50. C. Ax. 180.
L + 1 + 50. C. Ax. 180.

As a proof test we made the following, nearly four months after the above, in the case of Mr. C. G. B., 1895, March 22, 9.40 a. m.: Scopolamine, one drop of a one-eightieth per cent. solution was instilled in the right eye. 9.50 a. m., one drop. 10.30 a. m. one drop.

10.45 a. m. 20/200 = 20/15. W + 4 + 50 C. Ax. 180.
Jeager No. 1. W + 8.50 + 50 C. Ax. 180.
No reduction in spherical for Jeager No. 1 at nine inches.

March 24, 11 a. m. Jeager No. 1. W + 4.50 + 50 C. Ax. 180.
" 25, 10 a. m. Jeager No. 1. W + 3.50 + 50 C. Ax. 180.

Accommodation restored on this day and same glass retained in right eye with perfect satisfaction.

February 18, 1895. M. B., aged 16; R. & L. 20/15. J. No. 1.
Scopolamine, two instillations, one drop each of a one-fifth per cent. solution. Test made one hour after first instillation.

R. 20/50 = 20/15. W + 1.50 + 50 C. Ax. 65.
L. 20/70 = 20/15. W + 1.75 S.

February 19. R. 20/30. L. 20/30.
" 20. R. 20/20. L. 20/20.
" 21. R. 20/15. L. 20/15. R. & L. Jeager No. 1 at proper distance.

February 21, ordered: R. + 1.50 + 50 C. Ax. 65.
L. + 1.75 S.
April 5. No return of headache.

It must be remembered that the drop from a small pipette used in dropping these solutions of scopolamine on the cornea is less than one-half and probably not more than one-third of a minim of water. Hence, in the case where only three drops of a one-eightieth per cent. solution was used, only one, or at most one and a half minims produced complete mydriasis. One drop contains $\frac{1}{4000}$ to $\frac{1}{8000}$ of a grain. Are there many drugs that can under any circumstances display such a potency? Yet we are not sure that a solution of one-half the above strength will not produce the same results. We will continue to reduce the strength until we find the minimum amount that will quickly produce paralysis of accommodation. This great potency has prevented the drug from being used in the clinics as much as was first expected; hence we are still unable to add the experience of others to our own.

DISCUSSION ON DR. HOBBS'S PAPER.

Dr. J. L. Hiers of Savannah: I have been very much interested in the paper read by Dr. Hobbs. Although scopolamine is an agent with which I have had no practical experience, there was one point that struck me forcibly, and it was this, that he used it in glaucomatous eyes for the purpose of examining the fundus. I would beg to differ with him on that point, because I think we can get the necessary dilatation with a solution of cocaine in various strengths—eight or ten per cent., or even weaker—if dropped in the eye at intervals of five minutes. Any remedy that would paralyze the power of accommodation I certainly would be afraid to use in a glaucomatous eye.

In closing the discussion, Dr. Hobbs said: In answer to Dr. Hiers's fears of resorting to a mydriatic in glaucoma, and to his predilection to cocaine for dilating the pupil, there is nothing more natural than that one should have the preconceived idea that an increase of tension would follow a paralysis of accommodation, but upon what is such an idea based? Is it because atropia does it? But why should scopolamine produce this effect because atropia does it? As a matter of fact, this new mydriatic does not increase intraocular tension. I will acknowledge, however, that it was with a great deal of temerity that I risked it in a glaucomatous eye the first time. I did it in the acute stage where the pupil was small, and I desired to see the fundus and also verify or not whether so small a pupil could exist in a case of glaucoma. I had never seen an increase of tension from scopolamine in any previous case, still I do not wonder at the doctor's fears that it would produce an increase of tension, as I did myself, simply because we know that atropia does it; yet there is no real parity of logic that should enforce such a conclu-

sion. Even from a therapeutic standpoint I cannot think, granting the fact that it dilates the pupil more rapidly than atropia, which I do not believe, although it paralyzes accommodation in two per cent. of the time, that the effect upon the iritic angle could, as has been suggested, cause this difference in the infiltration. Indeed, such an explanation would be unwarrantable, and we are compelled to fall back on our old *dernier ressort* in therapeutic logic, and say: "this is its peculiarity," "this is its selective property," not to increase tension, as eserine selects to paralyze the radiating fibers of the iris, and atropia to do the opposite, by paralyzing its sphincter muscle. Cocaine has no cyclopegic effect upon a glaucomatous eye.

A DUTY OF THE STATE MEDICAL ASSOCIATION.

BY F. M. RIDLEY, M.D., LAGRANGE.

Were I disposed to indulge in mere verbal criticism I might say that the term lunatic, as applied to the victims of mental disease, whether organic or functional, is palpably misleading. So much so, indeed, that it deserves to be banished from our medical nomenclature, nor less does it deserve to be expunged from our school dictionaries. Its current use grew out of the venerable superstition that "the inconstant moon, which nightly changes its circling orb," is an important factor in the production of nervous disorders, and that its various phases have great influence on their successful treatment. This theory of the ancient astrologists is no longer accepted outside of extremely rural districts where a belief in ghosts and witches still has a foothold in the popular creed.

The general term insanity is far more significant, and has in recent years utterly exploded the idea of lunatic influence in the production of all classes of neurotic ailments.

The word embodies a conception of the most direful malady that has ever afflicted the human race since Adam and Eve were driven from Eden, and the tree of life transplanted to that apocalyptic river where "it grows twelve manner of fruits, and whose leaves are for the healing of the nations."

If our statistical tables may be relied upon, the increase of this fearful disease may well alarm the philanthropist and the physician.

How much of this is due to our sanitary methods and our habits of imprudent living is in no small degree conjectural. Heredity, we know, plays an important part in this tragic drama, and social customs, notably among these the morphine and whisky habits and the careless use of narcotics in the hands of physicians, have contributed to swell the ranks of the vast procession that journeys on to degradation and death. Fortunately there has been developed in these later years, along with skillful diagnosis, a wonderful method of brain surgery which, in many organic lesions of the great nerve center, has wrought wonderful results.

But what is not less a matter of congratulation is the vast strides which have been made since the early days of Bedlam and Bicetre, in the treatment of functional neuroses by electric agencies, by scientific massage, and by intelligent medication. These systems will inevitably lessen the ratio of mortality, and diminish the alarming increase of insanity to which I have already referred. Vast improvements in this direction accumulate where proper attention is given to the moral treatment and proper dieting of the inmates of our numerous State asylums.

Another step brings us to the consideration of the proposition suggested in the title of this paper. It is a question which profoundly concerns the members of this Association.

You gentlemen will readily acquit me of any purpose to question the personal integrity or professional ability of that cultured gentleman who, during a long series of years, has held the superintendency of the State asylum, and who, in connection with his assistants, has

conducted its therapy and its discipline, but it would be disingenuous in me to deny that there has been dissatisfaction at conditions and disappointment as to practical results.

Under any management mistakes are inevitable, but it is none the less our duty, as I conceive it, to, as far as in our power lies, correct them and remove the cause of them, if we are wise enough for the task.

Most, at least, of us are satisfied that inadequate legislative appropriations, to a great extent, lie at the bottom of the evils to which we allude.

According to one of the latest reports of Dr. Powell, there are now about 1,800 inmates in the asylum. So densely packed are these unfortunates, that fresh applicants are frequently, of necessity, refused admission to the place on the ground (which is anything but a shallow pretext) that it would be dangerous to allow the number of patients to increase. As a consequence, in a deplorable number of instances, filthy county jails, swarming with vermin and poorly furnished with beds and covering, are converted into temporary sanitariums for the treatment of the insane, and this, too, at the outset of the attack, when skillful nursing and the best medication are most demanded.

Into these wretched prisons, provided for the safe keeping of thieves and culprits, are thrown delicate women and gray-haired sufferers, not for crime, but on account of sheer misfortune. Surely, every Georgian, not devoid of becoming State pride, feels the blood mantle his cheek for shame as he gazes on this not overdrawn picture.

We do not charge these things on Dr. Powell or his Board of Trustees.

We have witnessed with what assiduity he has plied the Georgia legislature, year after year, with arguments

and appeals for funds to be appropriated to the amplifying and furnishing the asylum buildings. By untiring persistence an appropriation quite too small was secured. The work has been singularly delayed, however, by whose default we are not advised. But it is now believed that the new structure will be in readiness by the close of the year. Let us hope that something will be done by which no emergency such as the present will ever again overtake this institution. As a means of preventing this it has been suggested that a new asylum should be promptly erected at Atlanta, Augusta, Savannah, Griffin, or some other eligible point, for the exclusive occupancy of the colored race. This plan is both practicable and desirable. Before the civil war insanity was a rare disease among the negroes of the South. The emancipation policy which Mr. Lincoln precipitated on the country, avowedly for humanitarian purposes, but really to secure himself a second presidential term, has imposed a heavy burden on the taxpayers of Georgia, who have to educate their own children and provide shelter, treatment, and subsistence for their pauper insane.

This is an obvious necessity and a part of our heritage, resulting from the issue of the late war. These "Wards of the Nation," God save the mark, are put under restraint for their own security as well as the protection of society. In this, as well as in our schools and churches, it is needful to draw the color line, if we would avoid bickerings and antagonisms.

Another change is demanded in regard to the visitation of the asylum. The present plan is, in many respects, objectionable. Hitherto, a committee has been dispatched, at stated intervals and at the public expense, to investigate the affairs of that institution. It is composed of laymen, generally, who know as little of in-

sanity as they do of Sanskrit. The officials of the asylum of course know of their coming, and consequently, naturally and properly, everything is put on the best footing possible for their arrival. In due time their report is submitted to the legislature and goes through that body without a call for the yeas and nays.

Suppose another scheme of investigation should be inaugurated—*i. e.*, let the governor appoint a committee composed of seven of our ablest physicians to visit the asylum at least once a year and not at stated times. Let them be clothed with full powers to make a searching, sifting examination of every department, from the kitchen to the superintendent's office. Submit to his excellency a carefully prepared report, to be transmitted by him to the legislative body, suggesting such improvements in sanitation and general conditions as may seem to them to be urgent and feasible. Let them urge greater attention to the moral treatment of the inmates, as may be suggested by expert study and investigation of the best systems of Europe and America.

This, it may be said, will require some outlay of money. I would suggest that money thus spent is well spent, and should be met by the funds of the State treasury. I forbear further details. If this intelligent body sees proper to take hold of this important matter, and I believe it will, the commission appointed could accomplish all I have suggested and more.

One thing that has been alleged against the present management is the improper classification of patients. Superintendent Powell, in his last annual report to the Honorable Board of Trustees, admits the correctness of this view, and attributes it to the overcrowded condition of the buildings. This should be properly investigated, as it is, of necessity, a sore evil. It is obvious that nothing is more likely than this unfor-

tunate condition to prevent and retard the convalescence of the inmates. Frequent contact with persons with whom they have no moral affinity and no community of tastes is sure to arouse the resentment of any class of the insane.

Superintendent Powell suggests that it might occasionally lead to acts of violence that would mar the harmony and discipline of the institution.

Too much care cannot be exercised in the choice and assignment of capable attendants to particular male and female wards. If there is a misfit in these details, the attendant is quite sure to be a hindrance rather than a help to the recovery of the patients. Indeed, within the narrow scope of his duties, the attendant is but little less important than the physician. Every care is necessary in the selection of these subordinate officials. Cheapness should not be regarded in comparison with fitness. It is likewise of prime importance that ample provision should be made for placing its surgical department on a basis with all the improved appliances, with all the advanced skill of the present century. In latter days wonderful strides have been made in brain surgery. The State asylum should be in thorough equipment for its successful practice.

There is another department of the work of the asylum that claims our attention and which calls for the careful consideration of this Association. I refer to the inadequacy of the medical staff to perform the vast amount of professional labor assigned it. As previously stated, there are about 1,800 inmates, suffering a score or more of nervous ailments. For the medical treatment of this multitude there are not exceeding four on the medical staff, a ratio of 400 and more patients to one physician, proportionally a greater charge on the physicians of the Georgia Insane Asylum than of any other

similar institution, not only of the United States, but of the world, so far as we are informed.

A very simple arithmetical calculation demonstrates their insufficiency to do with efficiency the work required of them.

It occurs to me, Mr. President and gentlemen of the Association, that it would not be out of place to memorialize the governor to co-operate with a committee from this Association looking to the remediation of these conditions.

I am quite sure that all and singly, the suggestions of this paper will meet the approval of Dr. Powell and his assistants, who have doubtless already had them in their thoughts. Let us hope that the present session of this intelligent body, convened from all parts of the State, will give fresh impetus to the asylum.

We owe it to ourselves, we owe it to humanity, nor less to the State, to bring ourselves in touch with an institution established for the benefit of a class who are literally powerless for their own protection.

Who are so well-fitted as the members of the medical profession to aid and direct in this work of humanity, as you gentlemen; who have so often braved the storm and the frost, administering alike to the rich and the poor, whether in their palatial homes or dingy hovels?

Every student of Shakespeare has been struck by the incidents of that midnight tempest which beat so ruthlessly upon the unsheltered head of King Lear, crazed by the cruelty of his unnatural daughters, Regan and Goneril, wandering aimlessly over the "blasted heath," while the lightning's red glare fitfully illumined the tragic scene and the deep-toned thunder "rumbled its belly full"; and yet that other scene where "my Lord Hamlet," having seen the ghost of

"buried Denmark," argues with himself that question, "to be, or not to be." Such spectacles of frenzy are of nightly occurrence in the Georgia asylum. And they appeal loudly to every sympathy for help and for healing.

But let the curtain fall upon this gruesome picture. Let us, gentlemen of the Association, lend our undivided and united aid to the betterment of these conditions, to the improvement of our insane asylum, and thus, in a larger measure than ever before, serve our fellow-man by thus contributing to the alleviation of suffering humanity.

DISCUSSION ON DR. RIDLEY'S PAPER.

Dr. Wm. A. Love of Atlanta. Mr. President, if I am in order, I would move that the paper to which we have listened by Dr. Ridley be received with the thanks of the Association; that the recommendations contained therein be carried out, and that provisions be made to further the object that he has in view in presenting the paper, and also that the subject-matter therein presented be placed in the hands of a committee of five to present it to the proper authorities, the governor and legislature.

Seconded by several members.

Dr. F. W. McRae of Atlanta: It is undoubtedly in order to consider a motion in connection with the paper, and that, I understand, was Dr. Love's intention. It seems to me there is no more important subject that has been or will be brought before the Association than the one which has been so ably presented by Dr. Ridley, and personally I agree most heartily with the opinions which he has there expressed. It is a duty we owe to the people of the State, and to the unfortunates who are our wards. I do not think we can commend too

strongly the recommendations which Dr. Ridley has presented to this Association.

Dr. R. E. Griggs of Columbus: I heartily agree with the points brought out by Dr. Ridley in his excellent paper. Some of us, as members of this Association, have seen the necessity of help and legislation along this line. You will doubtless remember that in 1893 this matter was brought up at Americus, and afterwards a committee was appointed, and made its report after considerable lobbying with the legislature. As a result of the work of the committee we secured an appropriation of $100,000. Since we got that much money the work has been slow. More money is greatly needed, and there should be appointed more physicians to assist Dr. Powell, who has done everything he could possibly do for the relief of suffering humanity.

Dr. Love: Just one word. While I sympathize with suffering humanity, and know what it is, I also have my sympathy for the physicians who have them in charge, and have imposed upon them the extraordinary amount of duty that is required by the regulations of the institution. Those of us who treated the sick and cared for the wounded, as many of us had the misfortune to do during the war, are satisfied that one physician can give very little attention to the four or five hundred inmates of a lunatic asylum. It is for an increase of the force of the medical staff that I make an appeal to the profession here, as well as for the benefit of the unfortunate inmates of the institution.

Dr. T. M. Greenwood of Mineral Bluff: The paper of Dr. Ridley is timely. Any one who has given this subject any thought can readily comprehend that if we, as a profession, take into consideration the elevation,

amelioration, longevity, and happiness of humanity, these unfortunates—with greater weight than any other class—rest upon us, and us alone. The greatest problem now before us, in my opinion, is how to care for them. A short time ago an article appeared in the *Virginia Medical Monthly*, written by Dr. Brady of Virginia, in which this subject was briefly but forcibly discussed; and what is true in this respect in his State is equally true in ours. True is his saying: "No physician in private practice averages twenty-five patients daily." How, then, can we expect the present staff to do what is really the work of twice their number?

As some of us live at a remote distance from the asylum we have no knowledge of it only historically, and we are sorry to say that the published reports make a very bad showing as compared with those of similar institutions of other States. But the most appalling are the living statistics which the patients of our institution promulgate. We have closely examined some of them before going there, and after their return, and have found that they have been sent away with grave physical abnormalities unnoticed, or, at least, uncorrected. Our personal knowledge is that such patients relapse, and some have been returned, while others are soon to follow.

Dr. Willis F. Westmoreland of Atlanta: There is no doubt about the necessity of the appointment of a committee to carry out the suggestions along the line spoken of by Dr. Ridley. These poor unfortunates in our asylum are there on account of the progress of the disease; they become the wards of the State, and yet are treated infinitely worse, so far as the per capita allowance of feeding, clothing, and medicinal treatment is concerned, than the criminals are treated in the peni-

tentiary. It is only a question with the State. The State pays for it, and they should require no better treatment of one class than they do of the other. There is absolute need of a larger medical staff to properly care for the inmates of the asylum. In addition to what has been said on the color line, there is no question about the fact that there should be separate male and female asylums. The mere fact that there has been an illegitmate birth among the insane solves the question as to the necessity of separation of the two classes. In addition, therefore, to what Dr. Ridley has said with reference to color, I would offer that suggestion in regard to female and male inmates of the asylum.

President Westmoreland then put the motion, which was carried. He stated that he would appoint the committee later in the session.

A NEW METHOD OF EXAMINING THE RECTUM.

BY R. R. KIME, M.D., ATLANTA.

Recognizing the advantages of the knee-chest position in gynecological work, I have for some time been endeavoring to apply the same method in the examination and treatment of diseases of the rectum.

By the use of an ordinary small sized Sims speculum the rectum can be ballooned with air by placing patient in knee-breast position. Elevating the foot of the table or lowering the head will facilitate the examination.

While investigating on this line *Mathews' Quarterly on Rectal Diseases* was issued, containing an article by———, setting forth the methods and instruments used by Professor Howard A. Kelly. Since then I have also received a copy of an article, written by Dr. Howard A. Kelly himself, stating that he had practiced this method for some years using tubular specula with reflected light. Yet having previously announced that I would present this subject, I contribute a short description as to the method and instruments I have used.

Finding the various rectal specula on the market inadequate, that the Sim's vaginal speculum was painful to use and did not give sufficient working space, I devised the instrument which I present. It is constructed on the principle of a cylinder, with one-third ($\frac{1}{3}$) the circumference removed, smaller at the distal end, gradually increasing in diameter as it approaches the handle; the remaining two-

thirds ($\frac{2}{3}$) of the cylinder is divided into two equal parts and attached to handles, as you see, so as to expand and stretch the rectal outlet to the extent desired and thus held by ratchet at extremity of handles. The blades of the speculum form two-thirds of cylinder, which readily retains the hard rubber plug that renders its introduction easy and comparatively painless. When plug is removed the greater part of the rectum is exposed to view except posterior wall just behind speculum; then by expanding blades this can also be brought in view to a great extent. In this manner a greater extent of surface is exposed to view and a greater working space is secured than by any other method I know of.

I have not tried the tubular specula as used by Dr. Kelly, but should think they are well adapted to the examination and treatment of the rectum by use of the artificial reflected light.

By the instrument and method just described the lower and middle third of the rectum can be exposed to view without artificial or reflected light, besides operations and treatment can be performed that could not be done through a tubular speculum. If desired, the structures higher up in rectum can then be brought into view by reflected light and use of an ordinary laryngoscope. To examine the sigmoid flexure I should consider the sigmoidoscope of Dr. Kelly the most efficient method.

By the above described method I have been enabled to expose small tuberculous ulcerations, to introduce powders by insufflator, fluids by long nozzled syringe high up in the rectum, even to sigmoid flexure; also to make applications and apply dressings to ulcers in the rectum without disturbing surrounding structures.

In conclusion I present in brief:

1. The instrument is easily introduced.
2. Comparatively painless.

3. Exposes greater surface to view than any other.

4. Gives greater working space.

5. Can be used in operations as well as examinations.

6. Can be used as a vaginal speculum as well as rectal, an important consideration with many young physicians.

7. Can be used without reflected light or complicated apparatus.

8. Does not require an assistant to use it in ordinary examinations.

THE APOSTOLI TREATMENT OF UTERINE FIBROIDS.—A REPORT OF NINE CASES.

BY EUGENE R. CORSON, B.S., M.D., SAVANNAH.

With all due deference to Ephraim Cutter for his initial efforts in the treatment of uterine fibroids by electricity, to George Apostoli belongs the credit of placing this treatment upon a scientific basis. He has given us a technique that is efficient and practically harmless, he has shown the profession the necessity of a proper knowledge of the physics of electricity before applying it to the cure of disease, and he has given us the results of a clinical experience unequalled by any one. His paper before the Tenth International Medical Congress* on the electrolysis of myomata is a model of scientific excellence; in fact, all his writings which have come to my notice have shown that conservatism, that careful attention to details, and that thorough acquaintance with the physics of his subject which mark the true scientific spirit. In his hands Ohm's law becomes a working formula of easy application. He has shown us how to reduce the important factor of the body's resistance and thus to increase the amount and intensity of the current employed; I mean especially to the use of electricity in uterine disease. The more we can reduce this resistance, the greater the current we can use, and it was only when large currents could be applied to uterine fibroids *without danger* that electricity could be recognized as a curative agent in this disease. If we had to rely on the technique of Cutter, electrolysis would

*Verhandlungen des X. Internationalen Medicinini-chen Congresses, Berlin, 4.—9 August, 1890. Band III., p. 181.

have long ago been abandoned in the face of the marvelous results obtained by hysterectomy in skilled hands. Cutter's paper on the electrolysis of myoma, which followed Apostoli's at the Tenth International Congress, though an honest statement of his work and its results, shows a strange ignoring of Apostoli's improved technique, not to say ignorance of the workings of Ohm's law. Apostoli was to find one of his first and his greatest champion in Thomas Keith, who, in spite of his brilliant record in hysterectomy, discarded the knife for the less dangerous treatment of his confrère across the Channel. This surely was tribute enough, and Keith's renunciation of his own brilliant operative work and adoption of Apostoli's safer treatment did much to give Apostoli recognition.

Dr. Keith, in speaking of hysterectomy, writes:

"I often ask myself the question: Does a mortality of eight per cent. justify an operation for a disease that, as a rule, has only a limited active life, that torments simply and that only for a time, though of itself it rarely kills? The mortality of an ordinary uterine fibroid, if left alone, is nothing approaching a death-rate of eight per cent. I doubt even if the mortality of the extreme cases exceeds this. And, after all, the great difficulty is, not in doing even the worst of these operations, but in knowing what are the cases in which it is right to advise those who trust themselves to us to run the risk of a dangerous operation, with all its attendant miseries. Could we get the mortality down to five per cent. in the bad cases, and these only are the fit subjects, then one might advise interference with a more easy mind. I do not think that we can so advise, if the mortality cannot be kept under ten per cent."*

Apostoli, as he has again and again asserted, does not pretend to cure all cases of uterine fibroma by his method. He only asserts most positively that a very large majority

*Quoted by Skene, Diseases of Women, p. 365.

of the cases are symptomatically cured, and the number left to hysterectomy very small.

A review of Apostoli's recent publication,* a collection of papers giving the results of his treatment all over the world, bears testimony in a most convincing way to the good results obtained. But he has taught us not only how to treat uterine fibroids but other uterine troubles which are amenable to electricity, and I regard his method in the treatment of metritis, endometritis, and subinvolution as even more important, from the greater frequency of these troubles. I have seen a subinvoluted uterus, with a thick, enlarged cervix, with ectropion of the lips and a profuse and offensive discharge, a condition forcibly suggesting trachelorrhaphy, disappear rapidly under a current of seventy-five milliampères for ten minutes twice a week. An endometritis fungosa, which sometimes fails to yield to curettage, I easily cure by a moderate current without pain or annoyance to the patient. I have abandoned forcible dilatation of the cervix for curettage, relieving these cases more promptly and more easily by the galvanic current, and I hold it as a good rule to *never curette when the curette cannot be introduced without previous dilatation of the cervix.*

There is a class of cases where the symptoms point but in a vague way to the pelvic organs, and where a physical examination fails to find much the matter with uterus or adnexia. The symptoms are largely of a nervous or hysterical nature; there is but little or no pain that can be localized; there is slight or no catarrh of vagina or cervix, and the patient reports a more or less prolonged use of glycerine tampons without benefit. I have found galvanism an easy cure for such cases. There seems to be some trouble with the endometrium or with the circulation in the pelvis which the positive pole *intra uterum* relieves.

* Travaux d'Électrothérapie gynécologique: Archives semestrielles d'Électrothérapie gynécologique, Fondées et publiées par le Dr. G. Apostoli. Paris, 1894.

Of the Apostoli treatment of uterine fibroids I wish to report the results in nine cases, five colored and four whites. In two cases, one white and one colored, the tumors after treatment could not be detected by bimanual palpation. They were originally small, yet large enough to cause much trouble from pain and hemorrhage. In the white case the tumor was in the posterior walls of the uterus, causing constant pain in the abdomen and general symptoms of malnutrition. Two months of treatment cured this case. In the colored case the tumor was in the fundus, and the chief trouble was painful and profuse menorrhagia. This case was under treatment two months with apparently absolute relief. I could detect no tumor, and three months after stopping treatment she again returned to me, and I still was unable to find the growth. Two or three months later she was taken down with intense abdominal pain and flooding, and died in other hands, so that I am at a loss to explain the exact state of affairs.

The clinical reports recently collected by Apostoli in the above mentioned volume bear witness to the disappearance of small and recent fibroids under electrolysis, a result which is not claimed or expected from the larger growths.

In four colored, the growths reached the umbilicus, and the tumors were reduced one-third in size, with a disappearance of the symptoms for which they sought relief. These cases are symptomatically cured, and are practically in the condition of those with fibroids who are yet not troubled sufficiently to undergo any treatment for their removal. This reduction in size is usually quickly reached, and further treatment, though continued a long time, fails to effect any further reduction. With this reduction the usual symptoms of pain and hemorrhage disappear, or are improved *pari passu*.

In one case, white, though I got a reduction in the size of the growth of fully one-third, the menorrhagia and dys-

menorrhea were slower to yield, and then only after I had used currents of three hundred milliampères for ten minutes under ether. This case suffered so much that she was quite willing to undergo a hysterectomy. I noticed also in this case, as in some others, what has seemed to me to be a reduction in the thickness of the abdominal wall itself. I know how difficult it is to assure oneself of this fact, and I give it for what it is worth. Whether there is a relationship between the uterine growth and a deposit of fat in the abdominal wall I am not prepared to say, but I have noticed a diminution, apparent only or real, in the abdominal wall after the reduction in the tumor which seemed to me out of proportion to an apparent reduction due to greater suppleness of the skin from diminished tension.

Another case, white, is to me the most gratifying, because in the beginning I undertook its treatment with but little hope of improvement, and which has been most signally benefited. The patient was fifty-two years old and had a large, lobulated tumor extending above the umbilicus, with great abdominal tension and swelling of the legs. The probe entered the uterus six inches; the patient could not button her shoes; the hemorrhages were profuse. I used at first one hundred milliampères for ten minutes every week, and then stronger current, ranging from two hundred to three hundred milliampères under ether. The tumor was reduced a good third. Her physician, who had kindly turned the case over to me, judged it a good half. With the reduction the pain disappeared, and the hemorrhages were reduced to an ordinary menstruation. The patient left the hospital regarding herself as well. It is well known that those tumors which are active after the menopause are usually the soft variety of myoma, of a malignant or semi-malignant nature, and require a complete hysterectomy for their cure. I do not say that this was the nature of this growth; it was in all probability not the case,

but I do feel that the result obtained by electrolysis was a brilliant one.

As an offset to this case I have to report one which absolutely failed to yield, and the only one I have had, to the most persistent use of the current. Beginning with moderate doses of fifty to seventy-five milliampères twice a week, I increased them eventually to two hundred and even three hundred milliampères under ether, and using even acupuncture with insulated needles, instead of the pure copper electrodes, but without the slightest reduction in the size of the growth. In fact, when she left the hospital the tumor was up to the umbilicus and slightly larger than when she came under treatment three months before. This case was white, single, age thirty-five years, and had noticed the growth about a year. There was no great pain or hemorrhage, the uterine cavity six inches long, and the most careful examination could make out nothing but a lobulated fibroma, the larger portion on the right side. There was no parametric inflammation or evidence of diseased tubes or ovaries. The patient returned home, refusing to submit to the knife or further treatment. A letter written a month after her return describes her as feeling better generally, but without any reduction in the size of the growth. This case is interesting to me as being an exception, and I am totally at a loss to account for my failure. The current, in fact, seemed to aggravate, as there was always some increased swelling for two or three days following the séance, but which would go down before a reapplication.

The technique of Apostoli is now so fully described in our works on gynecology that it is unnecessary for me to go into its details, and I shall only speak of certain differences in my own application of his method.*

* See especially "Gynecological Electro-Therapeutics," by Horatio R. Biglow, M.D.

I have sought to make this technique as simple as possible. The central idea to my mind is to localize the current as much as possible, and to use a current strong enough to disorganize the morbid growth without too great a reaction and within the limits of safety; to produce, in short, an artificial catabolism. I have used mainly a Waite and Bartlett plug and socket battery of thirty cells; its plates are carbon and zinc and its solution bichromate of potash and sulphuric acid. This battery freshly charged, and in good working order gives me one hundred and fifty milliampères with the usual body resistance from well placed electrodes. By hooking up two of these batteries and using the sixty cells, I have gotten three hundred milliampères. But the high current and the smallness of the cell leads to rapid polarization, and the milliampèremeter shows a rapid reduction in the current. The one battery is all that most patients can stand, and more current requires anesthesia. This battery, moreover, as a portable battery, is the best one I know in the market, and I can recommend it in every way. It is easily kept in order and new plates can be inserted without much trouble. I change the fluid quite often. I use a Waite and Bartlett milliampèremeter, whose internal resistance, as tested by a delicate Wheatstone bridge, is $\frac{25}{100}$ ohm. I have found this instrument most satisfactory. I use a Massey carbon rheostat made by Otto Fleming of Philadelphia, a simple cheap instrument which meets every indication as a current controller; when open its resistance is 1,110,100 ohms, practically a non-conductor, and when closed for the entire current it offers a resistance of $\frac{25}{100}$ ohm only. At equidistant points on its circle I have had the resistances tested so I know exactly what the current has to overcome. I have fifty Edison-Lalande cells in my cabinet, the internal resistance of each cell being $\frac{87}{100}$ ohm. The electro-motive force, however, is low, about $\frac{7}{10}$ volt, and therefore more cells are required.

But it possesses the great advantage of little or no polarization or local action; the zincs never require cleaning, the solution does not crystallize or "creep," and there are no fumes.

I wish to call attention to the use of a Wheatstone bridge, a very valuable instrument, to my mind, in electrotherapeutical work, but too expensive, unfortunately, for the general practitioner.* It enables us to know exactly in each case how much we have reduced the body's resistance. In one case, for example, in a negress with a large fibroid, I found the resistance between the clay pad over the abdomen and the intrauterine electrode to be 2,426 ohms. When the clay pad was pressed more firmly over the abdomen this resistance was reduced to 2,167 ohms, a difference of 259 ohms, showing the importance of firm contact. Then after passing a current of 75 milliampères for ten minutes the resistance was reduced to 269 ohms. Again, in a white woman, with a large fibroid, with a pure copper wire (No. 8, English gauge) introduced six inches within the uterine cavity, and the clay pad over the abdomen—the abdomen having been poulticed three hours before the experiment to soften the skin—the resistance was 761 ohms. After the passage of a current of 200 milliampères for ten minutes under ether, the resistance was reduced to 145 ohms. These two experiments show how the passage of a current for a few miuutes prepares the way and reduces greatly the resistance, and indicates to us the necessity of gradually increasing currents when currents of great intensity are used.

I see no mention of the Wheatstone bridge in the literature on the subject. It seems to me that a careful series of experiments with this instrument would help us to still further reduce the body's resistance. It must prove of

*This instrument can be obtained from E. S. Greeley & Co., of New York, whose catalogue furnishes a good description of it. Any good work on electricity will show the principle on which it works. It measures from 1-100 ohm to 1,111,000 ohms; it costs about $100.

value in indicating to us how perfect our connections are, and the exact resistance we have to encounter, especially where we use strong currents. It assures us that our patient is in the best condition for the passage of the current. It may prove of value in giving us a clearer idea of the nature of the growth we have to deal with. Knowing the electro-motive force of our battery, and with an accurate knowledge of the internal resistances in our electric circuit, we have all the factors in our formula and the problem is easily worked out.

After various trials I am convinced that the clay pad of Apostoli is the best material for the external electrode. I have found that a poultice to the abdomen, in the shape of a wet cotton pad, a couple of hours before applying the current, reduces somewhat the resistance by thoroughly softening the skin. It may seem a small matter to mention, but the rectangular clay pad fits best when placed diagonally.

Instead of the platinum intrauterine electrode invented by Apostoli, I have used the simple brass stems of Goelet or, preferably, the pure copper wire which I have easily fashioned into electrodes, and which can be passed the entire length of the uterine cavity. I use principally two sizes, No. 8 and No. 12 wire, English gauge. I insulate the vaginal portion with strips of adhesive plaster. With this simple arrangement I have used currents of three hundred milliampères. The only disadvantage in using this metal in place of the platinum is the necessity of repolishing the brass or copper before each application, a minor consideration.

Apostoli teaches the importance, as a general rule, of using the positive pole within the uterus; I should regard this as quite an invariable rule, for all attempts to use the negative pole have been painful and followed by much discomfort.

It is hardly necessary to state the importance of aseptic

or antiseptic precautions in any manipulations within the vagina and uterine cavity; also the avoidance of shock from interruptions of the current or too sudden differences of electrical potential. This may be avoided by careful connections of rheophores and electrodes and a good rheostat.

If the surgeon, before he attempts to carry out the Apostoli treatment, will thoroughly understand Ohm's law and the principles of the electric current and electrical measurements, and then acquaint himself with the careful technique which Apostoli has so clearly laid down, he will not be disappointed in his results, and will find in his hands a curative agent of great power.

VITAL STATISTICS, ETC., AND THE HYGIENE OF THE CONVICTS, HOSPITAL, AND PRISON CAMPS OF THE PENITENTIARY OF GEORGIA, FROM OCTOBER 1, 1890, TO OCTOBER 1, 1894.

BY W. O'DANIEL, M.D. BULLARDS.

As an appointee of Governor W. J. Northen, I assumed the official duties of Principal Physician to the Penitentiary of Georgia on the 1st day of April, 1891, for the four years ensuing, consequently my term expired April 1, 1895. For convenience, however, we will consider the medical department of the penitentiary covering the period from 1890 to 1894.

The first six months of this period, my distinguished predecessor, Dr. H. V. M. Miller, was at the head of the department, he having consented to fill the unexpired term of the lamented Dr. W. F. Westmoreland, whose death caused the vacancy.

In Georgia, all of the convicts are owned and controlled by lessees, and are now worked in seventeen different counties in the State, viz: Dade, Walker, Bartow, Fulton, Oglethorpe, Elbert, Emanuel, Bulloch, Tattnall, Dodge, Wilcox, Dooly, Worth, Lowndes, Clinch, Charlton, and Ware. The penitentiary camps are, therefore, widely separated, and the prisoners confined therein are necessarily exposed to varieties of location and climate, and they are compelled to perform various kinds of labor, such as iron and coal mining,

manufacturing brick, agriculture, the lumber business, getting cross-ties for railroads, and producing naval stores. From 1890, to 1892 the total number of convicts handled by the penitentiary authorities was 2,802. Out of this number, during the *two* years, 107 went to "that undiscovered country from whose bourne no traveler returns."

From 1892 to 1893 the total number handled was 2,656, out of which number, during the year, 62 lost their lives.

From 1893 to 1894, 2,813 were controlled, and out of this number, from all causes, 63 died.

During the four years (from October 1, 1890, to October 1, 1894) 8,271 prisoners were handled by the penitentiary authorities. Out of this number during that time 232 deaths were reported from all causes. About 142 of these were from accidental injuries and *other* causes not amenable to hygiene and sanitary prevention. Approximately, 90 died from so-called preventable diseases.

The number of cases of *actual* sickness from 1890 to 1892 were 1,003 (for two years); from 1892 to 1893 were 697 (for one year); from 1893 to 1894 were 883; making the total number of cases of *all* kinds 2,583. The number killed by guards (trying to escape), by falling timbers, premature explosions in blasting, by cars, in mutiny, one executed by the law, and those who died from internal injuries, old age, and those who came from jails infected with gonorrhea and syphilis and their sequels, and from pulmonary consumption, heart disease, apoplexy, epidemic contagious diseases, epidemic la grippe, make about 950 cases during the four years, which, if deducted from 2,583 cases of all kinds during the four years, leaves 1,633 cases *possibly* preventable by perfect hygiene and faultless sanitary

conditions, which to obtain in convict camps is a physical impossibility.

The number killed from 1890 to 1892:

By premature blast explosion	8
In mutiny	5
Railroad cars	1
Slate fall	1
Executed for murder	1
Trying to escape	2
	18

The number killed from 1892 to 1893:

By premature blast explosion	2
Trying to escape (shot)	3
Falling timbers	2
By railroad cars	1
	8

The number killed from 1893 to 1894:

By slate fall	1
By railroad cars	1
By guard for resisting	1
By falling timbers	3
By trying to escape	3
By lightning	1
	10

Making a total of 36 killed outright in the four years. Of the 232 deaths in the four years from all causes, 36 were killed in the way stated above; about 106 from causes and diseases non-preventable *in prison camps;* about 90 from so-called preventable diseases.

From all causes the death-rate was *about* 35 in the thousand.

From diseases possibly remediable or preventable *about* 13 in the thousand per annum, or $1\frac{3}{10}$ per cent. This is a low death-rate, when we consider the fact that convicts come to the penitentiary directly from the jails; many of them after long confinement, and quite a number already suffering from chronic and con-

stitutional diseases, which would be incurable under most favorable circumstances and the best hygienic and sanitary surroundings and conditions, which we know cannot exist in penitentiary camps. Therefore, our tables of sickness and mortality have not yet been reduced as low as we would have them, but four years' experience in the Medical Department of the Georgia Penitentiary convinces me that ceaseless care and the frequent visitation and inspection of camps and the strictest observance of progressive hygiene and sanitation will reduce *preventable* sickness and mortality to the lowest possible minimum.

Old age, chronic and constitutional diseases, will unavoidably continue to increase the death-rate, so as to apparently make it widely disproportionate, to the number *actually* sick in hospitals.

During the four years about twenty deaths were reported from typhoid fever. Nearly all of them were from the northern part of the State, only two cases, I believe, from the southern or wire-grass region. Genuine typhoid fever, or typical cases of typhoid fever are seldom seen in the pine region of Georgia. We have what our physicians choose to call typho-malarial fever, or continued. Dr. K. H. Davis, who has lived and practiced medicine in the mountains of North Georgia forty years I suppose, says in a letter to me. "This death-dealing disease does not regard the high, or the low. It is found as often in the mansion as in the hovel. I think the cause of it is from polluted water, which we drink, made so by the fermentation of fecal matter, hog pens, bad sewerage, decomposition of vegetable and animal matter—fine soil for this death-dealing microbe." It is only just to say, that the camps where this disease prevailed mostly were what are called "home camps," or receiving and

distributing hospitals for the penitentiary; therefore, more invalids and convalescents were to be found at these North Georgia camps.

In the four years, about thirty deaths have been reported from pulmonary consumption; those engaged in coal-mining most susceptible, *especially* when there was an heredity or predisposition.

Georgia ought to be an inviting field for our northern friends, who are health-seekers, and especially to those who suspect pulmonary predispositions and inheritance. The pine region of Georgia is equal to Colorado for the consumptive. We have not the altitude, but we have the terebinthinates in abundance, the very best remedial agent for the mucous membranes of the bronchi.

The convicts in the Georgia penitentiary, as a rule, enjoy greater immunity from preventable diseases than free people in neighborhoods adjacent to the prisons. This ought to satisfactorily demonstrate the fact that sickness and the death-rate, when caused by diseases amenable to sanitary conditions, decrease proportionately with the improved methods of sanitation.

Our methods of hygiene and general sanitation in prison camps must necessarily be crude and imperfect, but we constantly urge and require scrupulous cleanliness of the buildings in which the well are kept and the hospitals, as well as the personal hygiene.

The water supply for drinking purposes must receive special and unceasing attention. He who imbibes polluted water unsuspectingly endangers his health and his life.

Personal hygiene and regularity of habits play a full hand in the prevention of diseases; and he who intelligently prevents disease, pain, and death is more deserving than he who skillfully cures; hence, the oft-re-

peated adage: "An ounce of prevention is worth a pound of cure."

8271 convicts controlled by penitentiary authorities in Georgia, from Oct. 1, 1890, to Oct. 1, 1894.

232 of that number lost their lives, from all causes, during that period.

36 were killed outright, in ways before stated in this paper, during the four years.

106 died from diseases and other causes not amenable to hygienic and sanitary prevention.

90 from so-called preventable diseases.

35 *in the thousand* lost their lives from *all* causes.

13 *in the thousand*, from diseases thought to be preventable.

Or, a $1\frac{3}{10}$ per cent. death-rate.

SOME RARE CASES IN OBSTETRIC PRACTICE, WITH SPECIAL REFERENCE TO THE TREATMENT.

BY C. H. RICHARDSON, M.D., MONTEZUMA.

It is not that I wish to present any new idea, or to unfold any new scientific investigation, nor is it to display cases successfully treated and to leave off those that have gone to the Great Beyond, that I use this subject and bring before you cases which I recall from my notebook of years, but that we might gain from each other's lessons of experience some of the rare cases that will sooner or later fall to the lot of us all.

From an extensive obstetric practice of thirteen years I have selected a few rare and grave cases, which I shall arrange in the order of their occurrence:

First.—"*Cæsarean Section.*"—Mollie M., a negress, multipara, living in a filthy little negro hut, eight miles in the country, had been in labor forty-eight hours under the supervision of a midwife, when I arrived on December 15, 1885. Upon an examination I found tetanic contraction of uterus. So strong were these contractions, that it was impossible to make a positive diagnosis of the presentation even under an anesthetic, also impossible to turn under complete anesthesia. Myself and my colleague, Dr. R. O. Engram, who was present with me, decided nothing could be done except to perform Cæsarean section. Preparing the patient and instruments as thoroughly antiseptic as

we could under the circumstances, I made the usual incision through the linea alba, peritoneum, and uterus, and extracted a living child; a red spot on left cheek bone of the infant indicated the presentation. The uterus, deep fascia, and skin were united by interrupted carbolized ligatures. Reaction was brought about by free stimulation and strychnine. Patient was treated antiseptically, but from the fact of lying almost in a bed of germs, in this miserable hut, died on Sunday of peritonitis. The child is living to-day.

Second.—"*An Elongated Cervix Mistaken for Placenta Prævia.*"—Blanche B., a negress, multipara. Was hastily summoned, on December 15, 1892, with the statement that the midwife, an intelligent old white lady, said that the placenta had come down first. On my arrival, in answer to my questions, the patient stated that she was taken in labor on the previous morning (twenty-four hours prior to this time) two miles from her home, and in order to reach her place of abode and prepare her bed before the noted event, she ran rapidly across cotton fields in order to get home sooner. Upon examination I soon saw that there was no hemorrhage, and there had been none, but on pushing my investigation, my finger came in contact with a large, thick, fleshy substance as large as my hand, which really felt like a placenta, but on tracing it up further, soon found out that it was the product of an old lacerated cervix. The strangest part of the proceeding to me was how this cervix, or portion of it, became so large and so elongated as to cause obstruction and prevent the termination of labor.

It possibly may have been due to her running across the fields, and the rough handling that she received afterwards. I found it impossible to push this mass up above the fetal head and apply the forceps, so with

one hand I pulled it down as far as possible into the vagina on the left side, applied the forceps and readily extracted a living child, with the exclamation of "God bless you" from the patient.

Third.—"*Shoulder Presentation.*"—This case was one of a gypsy woman encamped a few miles from town in a pine forest. Was called on January 30, 1892, but being engaged at the time, told the messenger if she were not delivered by morning I would go out. I was summoned quite early the next morning. When I arrived I found a gypsy woman of middle age lying on a cot under a tent, situated in a lonely pine forest, with no one present but her husband and an old ignorant negro midwife. Upon inquiring of the old midwife what was the trouble, she replied, "I dunno, sir; I dun gib dat creature ebbery ding from piping her to gunpowder tea, and I aint made her break her holt yit."

Upon examination I found that I had a shoulder and arm presentation to contend with, but on account of the tetanic contractions of the uterus, it was impossible to get the hand in the uterus to turn even under anesthesia, and the arm of the child was in the way, preventing turning by podalic version. As the child was already dead, I pulled the arm down and disarticulated it at the shoulder-joint; then with difficulty running my hand up the uterus, I grasped a foot and performed version in this way. I delivered the child with difficulty as the contracted uterus would grasp the child's head after the body was delivered. Strange to say, under antiseptic treatment she got on without any trouble and started on her journey in about ten days.

Fourth.—"*Partial Separation of the Placenta.*"—Mrs. S., primipara, white. On the afternoon of October 20, while walking down the doorsteps, stumbled and fell to the bottom. She only received apparently a slight

shock, and very little inconvenience from the fall, but in a few hours she noted that there was some oozing of blood from her, accompanied by a slight uterine contraction. About twelve o'clock I was summoned to her. As labor had commenced and the hemorrhage was not great, I decided to wait awhile on nature. Being of a naturally nervous nature (her sister a few months before having had a serious time), she was exceedingly more so from the fact that she knew she was having some hemorrhage. It was my idea to make the head come down as far as possible, so as to form a wedge or constriction to placenta, thereby preventing so much hemorrhage; so as soon as the os was fully dilated, I broke the bag of waters. I then waited several hours on nature, but as I saw my patient was gradually losing strength, probably from internal hemorrhage, I applied the forceps and delivered the child, which was asphyxiated. Probably the death of the infant was caused from hemorrhage of the placenta, cutting off its circulation, or strangulation by blood getting into its mouth. As soon as the child was delivered there was an alarming hemorrhage, which almost completely exsanguinated my patient, and would haved prove fatal in a few moments had I not grasped the uterus with my hand and brought on uterine contractions. She had a long and tedious recovery. She has since borne two children, both breech presentations. One was so completely asphyxiated that all the old women present said it would be wasting time to attempt to resuscitate it; but, after laboring with her for over sixty minutes, life began to be manifested and it is a living child to-day.

Fifth.—"*Albuminuria.*"—Mrs. T., white, primipara. Was called one evening to see her for a severe headache as she had not expected to be confined, and up to

this time had enjoyed excellent health. No œdema about any part of the body. On my arrival she remarked that she was sorry that she had sent for me, as she then felt better; but in a few minutes an intense headache began, and as she expressed it, of a boring nature. She remarked that she could hardly see me. I soon surmised what I had to contend with, but little did I dream that it would be so rapidly fatal. Told her that I would give her a dose of phenacetine to relieve her head. I gave her five grains and she seemed to get easy, but I soon noticed how strangely she was breathing; went to her and found her completely unconscious and could not be aroused. I could not get anything down her, so tried to bring on free catharsis by dry calomel on the tongue and action upon the skin by mustard footbaths and pilocarpine. Being a strong healthy woman with a strong pulse, I decided she would be a good subject to bleed, so took nearly two pints of blood in all from left vein. I drew off some urine from the bladder, and upon examination it consisted of nearly forty per cent. of albumin. There was at no time any indication of labor, neither had there been any unfavorable symptoms before I was called. I did not attempt to bring on labor. It has been a question with me ever since whether I should have done so. In little over six hours from the time of my arrival my patient was dead. I keenly felt the futility of my remedies in this grave case, and under similar circumstances I don't know that I could have done any better. I more keenly felt it from the fact that in an obstetric practice of over two hundred white cases, this was the first one that I had lost.

Sixth.—"*Albuminuria, with Convulsions.*"—Was hastily called on June 9th to see Mrs. A., multipara, near term, who sent for me during the absence of her

regular physician. As I reached her door they requested me to see her hurriedly, as she had another convulsion, having had one half an hour previously, when they first sent for me. As I walked in she was in the midst of a hard convulsion, which seemed to be in every muscle of her body, and lasted several minutes. I gave her at once one-eighth of a grain of morphia and $\frac{1}{120}$ grain of atropia hypodermically, and as soon as she regained consciousness I gave her eight drops of Norwood's tincture every two hours until I got the pulse down to eighty per minute; then I continued with five drops every three hours till the danger had passed of a return of the convulsion. In order to set the kidneys to acting and remove the effete materials from the blood, I also put her on two grains of calomel and one grain of powdered digitalis every two hours till there was free catharsis. She never had another convulsion from this time (6 A. M.) till 5 P. M. that afternoon, when she again had another convulsion, but soon after this she had several movements of the bowels, due to the mercury, and the convulsions never returned after this. Remaining with her all night, by next morning she was doing so nicely that I placed her on acetate of potash and tincture digitalis, to be taken four times daily, with request to call me if needed.

She went on for two weeks to regular time and was confined without any trouble in the least.

PREVENTABLE BLINDNESS, ESPECIALLY AS RELATED TO SYMPATHETIC OPHTHALMIA, WITH REPORT OF SOME TYPICAL CASES.

BY JAMES H. SHORTER, M.D., MACON.

Since first reading the works of Magnus, Cohn, and other investigators in this field, I have been much interested in the statistics of blindness, and having recently made an exhaustive examination of all of the inmates of that grand and noble monument to the enlightenment and philanthropy of Georgia—the State Academy for the Blind. I have received so striking an object lesson as bearing on this subject, that it has furnished me with a title for this paper. Out of the entire number of blind eyes no fewer than 25 per cent. could rightly be put in the category of those which might not have been lost, and these figures, large as they are, do not give a correct estimate of the absolute number of such cases in the State, as the Academy for the Blind is not an asylum but an educational institution, whose inmates are restricted to children within certain ages, and the length of whose stay is limited.

But to cover this entire field of preventable blindness, and all the questions bearing thereon, would make a paper many times longer than you would care to listen to, or I would be willing to inflict you with, so I restrict myself in this article to the subject of sympathetic ophthalmia—one which, though the cases fortunately are not frequent, is certainly of very great importance, and illustrates more typically than anything else the matter we treat of. For in cases of blindness from other causes which may be re-

garded as rightly preventable, as for example, from ophthalmia neonati, blenorrhea, corneal ulcers, glaucoma, etc., the eye may have been destroyed in spite of all care and the best skill, but not one eye should ever be lost through sympathetic inflammation. Where such disastrous results occur some person is to blame.

Sympathetic inflammation is essentially an iridocyclitis plastica. The pathology of the affection is, in spite of the vast amount of labor expended on the subject, still obscure. Why this special inflammation, starting seemingly as an ordinary iritis, should assume so virulent a nature and be so relentless in its progress is hard to explain.

Many theories explanatory of this have been put forth, but none are entirely satisfactory. Especially is this the case with regard to the mode of transmission or route by which the inflammation is transferred from the injured to the good eye.

Following Mackenzie, who first described the affection, the idea generally obtained that the propagation was by way of the optic nerve, but this belief was gradually abandoned in favor of the theory that to the ciliary nerves or to a certain nerve influence (supposedly reflex) transmitted by them, the trouble was due. Based on this idea the operation of optico-ciliary neurectomy was introduced and extensively practiced. More recently the opinion has again found favor, upon investigation of Deutschmann, that the transmission is by way of the optic nerve and by the agency of pathogenic germs. The iris and ciliary body being so extremely vascular and possessed of greater functional activity than other parts of the uveal tract, explains partially the fact of so exaggerated a proportion of the destructive process expending itself in this region.

Some of Deutschmann's experiments made on animals, whilst not entirely demonstrative of the truth of the theory, are interesting and rather convincing. We need only

mention that of injecting cultures of staphylococcus aureus, which he made into the eyeball as well as into the intervaginal space.

Pursuing the investigation these germs were found to travel from the point of insertion upward, following the course of the nerve to the brain, thence via the chiasm and along the optic nerve of the opposite side to the other eye. As might be surmised, the animals thus inoculated with such virulent germs almost invariably perished of general septicemia, but many of them survived long enough to develop a distinct optic-neuritis in the second eye and in a few iridocyclitis. Animals not being susceptible to sympathetic ophthalmia, all experiments to cause an outbreak, by making such traumatism as in man would be likely to be followed by this affection, are futile.

Most writers and all text-books divide sympathetic affections into two classes—sympathetic irritation and sympathetic inflammation. Some observers hold the two conditions are two distinct phenomena, that sympathetic irritation is a functional trouble, a reflex phenomena brought about through the agency of the ciliary nerves; whilst sympathetic inflammation is an organic affection, a genuine iridocyclitis from the start, set up probably by a transference of sepsis by way of the optic nerves. The fact that in sympathetic irritation, so called, the removal of the injured eye procures immediate and permanent relief from all symptoms of annoyance in the fellow eye, whereas in genuine sympathetic inflammation such operation exerts but little, if any, influence in arresting the course of the disease, adds much probability to the truth of this theory.

The symptoms of sympathetic ophthalmia are those of a low grade inflammation of the iris and ciliary body. The course is generally slow and insidious. The subjective phenomena are gradual failure of sight, and in rapidly progressive and fulminant cases pain may be severe; but in

most cases the latter is rarely complained of, thereby differing greatly from plastic iritis from other causes, wherein pain is a marked symptom. As to objective appearances, the change in color, loss of luster, and dead look of the iris are striking, as are the constant formation and steady increase of synechiæ, which finally become total, with complete occlusion of the pupil.

With the above described symptoms the diagnosis offers little difficulty. An irritative or anterior inflammation arising from no apparent cause in an eye whose fellow has been injured, is always suspicious of sympathy, and especially if the wounded eye be still irritable, inflamed, sensitive to touch, or has developed ossification.

The sympathetic outbreak is peculiarly prone to occur at time of active inflammation in the wounded eye; hence most frequently between the twenty-fifth day and the tenth week after occurrence of the injury. But in this connection it must not be forgotten that the fact of one eye being inflamed through injury does not make it certain that any trouble which may arise in the other is of necessity a sympathetic one. Whilst one eye is suffering from effects of a traumatism, an iritis, simple, rheumatic, or syphilitic, may develop in the other as a purely intercurrent affection. More than once I have had patients who had sustained an injury of one eye sent me in consultation on account of supposed sympathetic inflammation, where examination showed a keratitis, ulcer of cornea, conjunctivitis, or even cataract as the cause of the trouble in the good eye. This mistake is easily avoided by remembering that a sympathetic inflammation is always an iridocyclitis.

Furthermore, some injuries are followed seldom, if ever, by sympathetic ophthalmia, as for example when an eye has been lost by panophthalmitis. On the other hand especially prone to develop trouble are wounds in the region

of the ciliary processes and eyes which contain a foreign body.

The treatment of sympathetic inflammation is chiefly antiphlogistic, rest in bed in a dark room, hot applications, leeches, atropine, etc.; but any and all treatment promises at best but little when once the affection has declared itself. Prophylactic treatment on the other hand is always infallible and may be summed up in few words. Remove the injured eye, and to this may be added the further advice, do this in good time—at once if possible. When the enucleation is performed after the sympathetic trouble has once begun, my experience has been that it is neither prophylactic nor remedial in its effects. Formerly I removed the injured eye in all cases, no matter how far developed the trouble in the other, but I have yet to see a case in which the inflammation had already begun, where the enucleation caused any improvement or even a retardation in the malign course of the affection. In this connection I will briefly allude to one case which, from the sudden onset of the sympathetic inflammation, its destructive course in spite of early recognition of the condition and intelligent vigorous treatment resorted to, is a typical example of this, and illustrates also the probable futility of all remedial efforts.

The case came under my notice several years ago when I was acting as house surgeon at the New York Eye and Ear Infirmary. The patient, a member of the fire department, was admitted to the wards suffering from a contused lacerated wound of the cornea and probably of the iris of the left eye, received through falling of the ceiling in a burning building. The man had been some weeks in the Infirmary when I saw him. The injured eye had then still some vision, counting fingers at six inches, but was quite congested. There was cyclitis dolens and other sign of irritation. He had been advised to have the eye

enucleated, but positively refused his consent to the operation. The morning I went on duty, on looking through the wards I examined this patient rather carefully, though he reported himself as feeling very well and that the eyes were as they had been for some weeks. The left eye was as described above. At superficial glance the right eye seemed healthy, the iris was bright, cornea clear, pupil active, etc. Only to be seen by close observation was a slight pericorneal pinkishness, almost unnoticeable and too delicate to be called a real injection. I tested the vision and found it normal as was the appearance of the fundus. Still not being entirely satisfied, I put in a drop of solution of atropine. The dilatation of the pupil was not very complete, and being suspicious of the condition, I summoned the visiting surgeon, whose patient he was. He came promptly, and the man, having now grown rather anxious, consented to an operation and the injured eye was enucleated at once, the patient put to bed, and the other eye carefully observed and vigorously treated by leeches atropia, etc. By next morning the pericorneal injection had greatly deepened, the iris was less lustrous, and vision had fallen to one-half. From this time on the sight steadily and rapidly declined to quantitative perception of light, and when I last saw him three years ago he had been totally blind for some time. Now this man's future usefulness could have been saved by an early enucleation. I have gone into the history of this case thus at length, as it illustrates so typically the insidious approach of this affliction and its relentless progress in spite of early diagnosis and prompt treatment; in other words the futility of all treatment other than prophylactic.

It is in the text-books and has been long taught, that we should caution every patient with an injured eye as to the possibility of sympathetic inflammation and advise him to come at once for treatment on first appearance of pain,

redness of the ball, failing sight, or other symptom of irritation in the good eye. This has seemed to me unsafe advice to offer and calculated to seriously jeopardize the future of the patient, as it places him in a state of false security whilst awaiting a warning which may never come. For the above-mentioned case shows (and it is a type of most) that there may be often no prodromal stage, that the sympathetic inflammation may appear without any warning, and that once it declares itself, hope of saving sight is generally at an end. We believe of course in the existence of so-called sympathetic irritation, and all oculists of experience have seen cases with photophobia, conjestion, and other alarming symptoms in an apparently otherwise healthy eye whose fellow had been injured, all of which symptoms at once and permanently disappeared after removal of the offending eye, leaving no sequelæ; but as said above, this may be, and is so held by many, an affection *sui generis*, which is not an *iridoclyclitis*, nor of necessity would ever be followed by inflammation, though in the course of it the latter and graver disease might develop as an intercurrent affection. It would be fortunate if sympathetic inflammation was always preceded by definite prodromal symptoms, but unhappily, though this may be sometimes the case, it is not the rule.

I believe it is true that most frequently, in fact in a very great majority of instances, a sympathetic ophthalmia begins as a plastic iridocyclitis and without premonitory symptoms and is hopeless *ab initio*.

I will mention, and briefly only, two other cases. One, a boy four years old, was brought to me shortly before I left New York, with history of a wound of the left eye by piece of glass six or eight weeks previously. The child had cried at the time when the eye was dressed and bandaged, but had not complained much since, excepting recently of photophobia, but for some days before the

parents noticed that he did not pick up objects readily, stumbled over his playthings, and gave other indications of impaired sight. This caused them to seek medical advice. The examination showed in the left eye an inflamed scar from penetrating wound through the cornea and sclera, with incarceration of iris and traumatic cataract. Beginning phthisis bulbi, tenderness, tension minus. Only quantitative perception of light. Right eye showed well-developed iridocyclitis, already almost complete synechia and occlusion of pupil. V.= $\frac{1}{200}$. The left eye was enucleated, but in spite of all treatment the sight in the other grew gradually worse and eventuated doubtless in permanent blindness. This case is not out of the common, and only reported as showing the almost entire absence of pain and other subjective symptoms in spite of the rapid onset of the very grave affection.

The other, which is also interesting as showing the insidious development of the disease, occurred recently in the person of a boy of thirteen who was brought to me in September last and is still under observation. As bearing on the history, I may state that I was consulted about this patient rather accidentally, in this way: Whilst examining another child in the family, the father gave me the history of an accident which had happened to the young fellow's right eye some years before and had been followed by two or three recurrent attacks of inflammation in the wound. My remark that such injuries were sometimes a source of danger through provoking sympathy in the good eye, so aroused his apprehension that he had the boy come to me at once the same afternoon, although the latter had made no complaint whatsoever regarding his eye and was still attending to his duties as office boy in a business house.

Examination.—Right eye showed old vascular scar from lacerated wound (said to have been caused by blow from a twig) through cornea and some distance into sclera with

incarcerated iris. Lens was absent, having been operated on for traumatic cataract. Atrophy of the globe had evidently set in, tension was minus, and there was cyclitis dolens. He could still perceive movement of hand, but projection was faulty. On examination of his eye, I was shocked to find already pronounced symptoms of sympathetic trouble; there was deep pericorneal injection, dull lusterless iris, and numerous posterior adhesions. The media were fairly clear and fundus seemingly normal. Vision was $\frac{20}{50}$, slight photophobia but no pain, could still read ordinary print well. The patient was put to bed and vigorous treatment given, but, as is the rule, there was, in spite of everything, a constant and steady increase of the iridocyclitis, with gradual failure of sight.

The treatment seemed to restrain somewhat the violence of the inflammation, and for some months now the eye has been quiet and without further changes and shows little tendency to relapse. There is, however, about complete synechiæ, with considerable occlusion of the pupil, and vision has fallen to $\frac{15}{200}$. It has remained at this for some time past, but whether this amount of sight can be kept permanently is for time to determine. Six weeks ago there was glaucomatous tension, and I performed an iridectomy. I, of course, did not expect to accomplish much so far as making an artificial pupil is concerned, but I succeeded in getting out a considerable piece of iris, although the latter was very rotten and friable. The wound healed kindly, and tension has since been normal.

Our conclusions may be summoned up as follows: An injury to one eye, especially a penetrating wound, and in certain regions, is liable to be followed by sympathetic trouble in the other eye. This affection may be simply irritative in its nature, and even after weeks or months duration be cut short at once and permanently by removal of the offending eye. But in many cases the sympathetic

trouble may make its appearance from the start in the guise of an iridocyclitis, and, unfortunately, frequently without warning or premonitory symptoms, and is almost certainly of fatal prognosis as to sight. That of especial liability are cases of foreign body in the eye and of lacerated or incised wounds of the sclera in the ciliary region or of the cornea with incarceration of the iris.

An outbreak of sympathetic trouble is rare before four weeks after occurrence of the injury, and is especially to be apprehended at time of recurrence of irritation at the seat of the wound, even after the lapse of months or years. And experience has taught us that such eyes should be removed at once.

As a final question may be asked, should we, in every instance where one eye has been blinded and remains inflamed or tender, the other eye being still good, remove the damaged eye for fear of sympathy? Certainly not, for it is extremely rare that an eye damaged by idiopathic disease of the anterior portion, as by glaucoma absolutum, staphyloma of cornea, hydrophthalmos, phthisis cornea or panophthalmitis, is a source of sympathetic trouble, and it is of course impossible when the disease is of the fundus, though the irritation caused by wearing an artificial eye on an atrophied stump may sometimes be a source of danger. But I would lay down as an invariable rule that every eye, made totally or partially blind by a penetrating wound, and especially if the globe remain tender to touch, should be removed without delay. Even if there be some reasonable amount of sight still left in the wounded eye, this is not a contraindication to the operation, for it may be set down as almost a certainty that a severely injured eye in which attacks of inflammation recur, will be sooner or later lost. anyway. Sympathetic ophthalmia is fortunately not frequent, and doubtless many globes are needlessly sacrificed, but personally, I, for one, had rather know that I had re-

moved one hundred more or less useless eyes which might have been safely retained, than that I had permitted one single case of sympathetic ophthalmia to occur.

The three cases I have narrated belong certainly in the catagory of those where blindness was preventable and came, as a consequence, in the first, of stubborness of the patient; in the second, of ignorance or indifference of the parents or family physician, and in the third, of undue risk or recklessness of the surgeons first consulted.

DISCUSSION ON DR. SHORTER'S PAPER.

Dr. A. W. Calhoun of Atlanta: I agree with Dr. Shorter in his opinion about the necessity for an early operation in cases of sympathetic ophthalmia. It is a common affection, as most of you are aware, and I feel very much displeased with myself that I let one patient go blind on account of this. If I had acted more promptly, I might have saved the other eye. It is a question whether the sin of omission is greater than the sin of commission in these cases, but in cases that come under my care now I should not hesitate to operate. I remember seeing the patient on Saturday afternoon with a little irritation in the sound eye, and I told him to come and see me again Monday morning. At this time, when I saw him he had a fully developed case of inflammation in the hitherto good eye. Within half an hour I commenced to remove the damaged eye, but nothing stopped the inflammation, and it remained permanently blind. I reproached myself for not having operated on the patient Saturday afternoon. However, these things are liable to occur to any practitioner. If a patient comes to me with a recent injury of the cornea, or in which the ciliary bodies have been seriously injured, I do not hesitate to advise an operation, and if the patient or parents heed my advice in the matter, I always operate very promptly. The doctor's paper is very interesting to me, and one that it is important for the Association to consider carefully.

Dr. Arthur G. Hobbs of Atlanta: Dr. Shorter's paper has covered the subject very thoroughly and accurately. He has almost epitomized the subject. I think that he has brought out the milk of the cocoanut; and as to the point whether we should hesitate in operating or not in cases of sympathetic ophthalmia, it was well brought out. We should always remember that it is better to err on one side than on the other: that is, by removing one eye and saving the other, rather than leaving it in and sacrificing the other.

Dr. Shorter (closing the discussion): I do not think the advice given in our text-books is proper: that is, to wait for the development of premonitory symptoms, because I believe that an iridocyclitis sympathetica comes on generally without warning of any kind. It does not seem to me worth while to save an eye that is subject to recurrent attacks of inflammation, or one in which the ciliary region is injured to any extent. Such eyes are not of much account. They will degenerate sooner or later, and although the patient may have fair sight for six months or a year, so far as the usefulness of the patient's life is concerned, the sooner such eyes are removed the better.

LAPAROTOMY DURING PREGNANCY.

BY VIRGIL O. HARDON, M.D., ATLANTA.

The day is long since past when an abdominal section attracts attention by its novelty. Lists of "consecutive laparotomies" no longer possess interest or value except to him who reports them. Abdominal work has come to have a recognized place in surgery, its indications have been well established, and its *technique* varies in the hands of different operators only in minor and unimportant details. There are, however, a few points which still admit of profitable discussion, either from the rarity of the conditions involved or from the unsatisfactory results which have attended their treatment. Among these points may be classed the performance of laparotomy during pregnancy.

It is comparatively seldom that the surgeon is called upon to open the abdomen of a woman who is normally pregnant. When conditions present themselves which would justify such a procedure in the non-pregnant woman, the existence of pregnancy offers a complication which gives us pause and leads us to consider seriously whether the interests of the patient would not be better served by postponing the operation until after confinement. There is always present a fear of interruption of the process of gestation, involving the sacrifice of the life of the child in the effort to save that of the mother. Many cases therefore which would otherwise be legitimate subjects for abdominal section can no longer be so regarded when two lives are at stake instead of one. Urgent symptoms threatening one

or the other of these lives constitute the sole indication for surgical interference under such circumstances.

The altered conditions imposed upon the pelvic organs by pregnancy give a new and entirely different aspect to many diseases. The physiological engorgement and the rapid structural changes which accompany pregnancy, give to such diseases a different clinical history, and must be taken into consideration in discussing the prognosis and the treatment. The rapid development of tissue, most notable in the womb, but present also in other organs, extends to new growths in those organs and causes a rapidity of development of pathological processes proportionate to the rapid development of normal tissues. This fact must always be borne in mind as a factor in the prognosis. From it results the general principle that delay in operation which would be justifiable in the non-pregnant woman would often be unsafe in one who is pregnant.

Another question to be seriously considered in such cases is the effect which the diseased condition will have upon the fetus *in utero*. Conditions which are comparatively benign in their early stages as regards the life of the mother may, by pressure upon the uterus, or by the irritation of their presence, threaten miscarriage, with its attendant dangers. The question then presents itself whether the life of the mother will be more seriously jeopardized by operation, or by allowing miscarriage to occur. An additional question to be considered, is whether the physician has a moral right to allow the fetus to perish if by a comparatively safe operation upon the mother its life can be saved. The interests of the fetus cannot rightly be ignored except in those cases where efforts for its preservation would greatly augment the danger to the mother. It is a fortunate fact that in most of the cases which present themselves, the interests of mother and of fetus run in parallel lines.

Still another point to be considered is the effect which

the operation itself will have upon the continuance of pregnancy. When the condition is one which is threatening the life of the mother, this question can very properly be ignored. But when the life of the fetus alone is hanging in the balance, it is evident that to be justifiable, the operation must be one which offers a fair prospect of removing the obstacle which threatens its life. There are certain pelvic conditions which in their very nature must be excluded from this category. Operations which involve mutilation of the womb cannot be undertaken without compromising the safety of the child. But experience has proven that operations for the removal of the ovaries and tubes, and even of pedunculated subperitoneal fibromas are not incompatible with the continuance of pregnancy. It has been shown that such operations not only do not produce miscarriage, but that they have no effect upon the subsequent development of the fetus.

Probably the most frequent pathological condition that we are called upon to consider in this connection is that of fibroma of the uterus. It has been generally stated that the tendency of such growths is to induce sterility, and that when pregnancy does occur spontaneous abortion usually results. In a measure both of these statements are true, especially when the tumors are intrauterine or intramural. But many exceptions occur. It not infrequently happens that with the growth of the uterus as pregnancy advances, the tumors rise up out of the pelvis and symptoms caused by pressure do not occur. When the tumor springs from the side of the womb however and lies between it and the pelvic wall, the uterus may be subjected to such pressure as to produce serious trouble and call for active interference. In such cases it was formerly considered necessary to produce abortion; but as a result of the development of abdominal surgery, several operators have successfully attempted the removal of such tumors during

pregnancy. The success which has attended their efforts renders the induction of abortion under such circumstances no longer justifiable. Charpentier states that it is subperitoneal fibroids with long pedicles that are most apt to diminish the chances of pregnancy going on to term. Fortunately it is this variety which is most amenable to treatment by laparotomy and removal. Another point bearing upon the question is that the induction of abortion apart from its inherent dangers does not rid the patient of her tumor; hence, the same difficulty is liable to occur with each succeeding pregnancy, in addition to other dangers to which the patient is exposed by the presence of the tumor itself. From all these considerations a rational conclusion appears to be that where active interference has become necessary, removal of the tumor by laparotomy is the operation to be preferred as best subserving the conjoint interests of mother and child.

Ovarian cysts constitute another pathological condition which, when complicating pregnancy, calls for interference. The aspect of such cases differs from those in which fibromas are present on account of the less resistant character of the tumor and its ability to accommodate itself in shape to the growth of the womb. The grounds for interference are found either in the excessive pain produced by the pressure of the tumor, which is crowded against surrounding parts by the increased size of the womb, or in the apprehension of difficulty in the delivery of the child at full term. In these cases we have a resource at our command which in many instances obviates the necessity of removal of the cyst during pregnancy. If the cyst be of considerable size so that it rises above the pelvic brim and can be felt by palpation through the abdominal wall, or if it projects downward into Douglas's pouch so as to lie in immediate contact with the vaginal wall, it may be safely tapped and its contents withdrawn. In this way the

pressure symptoms may, for a time, be gotten rid of. The tumor will, however, refill, and it will be necessary to repeat the tapping with ever increasing frequency. A constant drain upon the patient's strength will result, and before the completion of the full term of pregnancy an alarming degree of exhaustion may render an operation imperative. The increased danger of operating upon a patient in this exhausted condition makes it necessary to consider carefully at the outset the probability of successfully carrying the patient through her pregnancy under this plan of treatment, and the advisability of removing the tumor while she is in possession of her full strength.

Cases sometimes occur in which the tumor, though of sufficient size to produce pressure symptoms, is not large enough to be easily reached by tapping either through the abdominal wall or from the vagina. The pain in such cases is not amenable to treatment other than the free use of opiates. The deleterious effects of continuous suffering upon the general health, and the equally injurious effects of the habitual use of opium, render a more radical treatment advisable in many such cases. It often happens, therefore, that while a patient with a large cyst can be successfully carried through her pregnancy by repeated tappings, it becomes necessary to subject a patient with a much smaller cyst to an abdominal section for its removal.

The presence of pus in the fallopian tubes is another condition which may call for operation during pregnancy. From a theoretical point of view, a woman who is suffering from pyosalpinx will never become pregnant. There can be no doubt, however, that pyosalpinx is sometimes present in pregnant women. In such cases it is to be presumed that one tube was unaffected previous to pregnancy, and furnished the pathway for the descent of the ovum, or that the disease developed *in toto* after conception had taken place. The existence of pregnancy does not protect a

woman from the untoward results of pus in the tubes. Recurrent attacks of peritonitis, with their attendant dangers to health and even to life, form the usual history in such cases. If the woman goes to full term under such unfavorable conditions, her confinement is attended with greatly increased danger, the puerperal period is prolonged and hazardous, and she rises from her bed, if she rises from it at all, a physical wreck. There can be no doubt that many cases of fatal infection during and after labor arise from the existence of pus in the tubes. In view of these facts, it would appear to be the part of wisdom to forestall the grave dangers of puerperal infection by subjecting the patient to the lesser danger of the removal of the suppurating tubes during her pregnancy. The same arguments which are now universally accepted for the removal of such diseased organs in the non-pregnant woman, apply with even greater force to their removal when complicating pregnancy.

There are, perhaps, other conditions in which the question of opening the abdomen of a pregnant woman may properly be considered. But those which have been presented are the most frequent ones, and others are of very exceptional occurrence and are to be viewed upon the same general principles. Operations for carcinoma of the pregnant womb and for ectopic pregnancy do not come within the scope of this paper.

The *technique* of laparotomy upon the pregnant woman differs in no material respect from that of ordinary operations. The principal precaution to be observed is the avoidance of unnecessary handling or manipulation of the uterus. The physiological engorgement of the pelvic organs renders hemorrhage more likely to occur, and every precaution must be taken to stop bleeding before the abdomen is closed. The ligation of the ovarian arteries in the removal of both ovaries and tubes does not affect in any degree the continuance of pregnancy or the development

of the fetus. This is readily understood when we consider the anatomical arrangement of the arteries which furnish the blood supply to the womb. The ovarian and uterine arteries are supplemental to each other, and if the circulation of blood through either be cut off, the other will take its place and the uterine circulation will not be interfered with. For this reason there is also no danger of imperfect involution of the womb after labor. The process goes on as perfectly as under normal circumstances. In closing the abdomen it is necessary to take special care that the edges of the incision be so united as to secure a firm union. The stretching of the abdominal wall as pregnancy advances renders the recent cicatrix liable to give way, with the production of ventral hernia. The different layers of the parietes should be brought into exact apposition, with especial care that the muscular tissue be fully included in the sutures. The drainage tube should be avoided if possible, as its use leaves a weak point in the line of union. A firm abdominal binder should be worn until after confinement to lessen the traction along the line of the incision.

I shall report two cases in which I have opened the abdomen during pregnancy.

CASE 1.—L. A., married, aged twenty-six years. Has always had robust health. In April, 1890, became pregnant for the first time. In the following August she began to suffer severe uterine pains accompanied by slight hemorrhages from the womb. These symptoms led her to seek medical advice. When first seen by me, September 18, 1890, she presented the usual symptoms of pregnancy at four months. But by external palpation the enlarged womb could be felt to be pushed over into the left iliac region, while the right iliac region was occupied by a round, immovable tumor, apparently separate from the womb. By bimanual examination it was found that the tumor lay between the womb and the pelvic wall, that it

was solid and attached to the womb by a thick pedicle. A diagnosis was made of a pedunculated subperitoneal fibroid, attached to the right side of the uterus, and impacted between the uterus and the pelvic wall. As the symptoms indicated a threatened miscarriage, and as the patient was exceedingly anxious that the child should be saved, it was decided to remove the tumor by laparotomy. The operation was performed September 25, 1890. Present, Drs. Harris and Kennedy. The abdomen was opened in the median line. Examination by the hand in the cavity confirmed the diagnosis. The tumor, which was of the size of an orange, was found to be free from adhesions, and by the exercise of a considerable degree of force was dislodged from the pelvis and brought up into the abdominal incision. It was found to be attached to the right side of the uterus by a pedicle as large as a man's wrist. The pedicle was tied in three portions by interlocking silk ligatures, which effectually controlled hemorrhage, and after being divided was dropped back into the abdomen. The abdomen was closed in the usual manner without drainage. The patient made an uninterrupted recovery, her temperature at no time reaching 100°. Without further symptoms of miscarriage she went on to the full term of her pregnancy, and on the 10th of March, 1891, was safely delivered by me of a living female child weighing ten and a quarter pounds.

CASE 2.—Mrs. J. J. N., white, aged twenty-four, mother of two children. Has always enjoyed good health. Conceived in September, 1894. About a month after conception she began to suffer with severe pains in both ovarian regions, which increased until she was confined to her bed and was obliged to be kept constantly under the influence of opiates. Her general health became very much impaired, and her digestive powers failed until she was scarcely able to assimilate any food. On the 25th of November I ex-

amined her, and found both ovaries enlarged and excessively tender. Six days later the abdomen was opened and the ovaries removed. Both contained cysts, one as large as an English walnut, the other as large as a hen's egg. The patient made an uninterrupted recovery, and has suffered no pain since the operation up to present time. She has gained strength and flesh rapidly, and is able to digest and assimilate a normal amount of food. She is able to attend to all her social and domestic duties, and her pregnancy has gone on without interruption.

CONSTITUTION AND BY-LAWS

OF THE

MEDICAL ASSOCIATION OF GEORGIA.

CONSTITUTION.

(ADOPTED 1873.)

ARTICLE I.

NAME.

The name and style of this Association shall be "THE MEDICAL ASSOCIATION OF GEORGIA."

ARTICLE II.

OBJECTS.

SECTION 1. The object of this Association shall be to organize the medical profession of the State in the most efficient manner possible; to encourage a high standard of professional qualifications and ethics, and to promote professional brotherhood.

ARTICLE III.

MEMBERS.

SECTION 1. There shall be only one class of members in this Association. Any regularly educated white physician, who resides within the limits of this State, who is a graduate of a regular Medical College in good standing, and who adopts and conforms to the Code of Ethics of the American Medical Association, shall be eligible to membership in this body.

ARTICLE IV.

OFFICERS.

SECTION 1. The officers of the Medical Association of the State of Georgia shall be as follows: 1st. One President; 2d. Two Vice-Presidents; 3d. One Secretary; 4th. One Treasurer; 5th. Five Censors.

SEC. 2. The President shall be elected for one year; the Vice-Presidents for one year; the Secretary for five years; the Treasurer for five years—but every officer shall continue in office until his successor is elected and installed in office.

SEC. 3. The Board of Censors shall be elected at the present session by the Association—one for a period of five years, one for four years, one for three years, one for two years, one for one year; and annually hereafter the vacancy occurring in the Board of Censors shall be filled by election

ARTICLE V.

PRESIDENT.

SECTION 1. The President shall be the chief executive officer of the Association. He shall preside at all the meetings of the body, preserve order, and give the casting vote when necessary, and perform such other duties as parliamentary usages imposes on presiding officers.

SEC. 2. He shall prepare and deliver, at the opening of each annual session, an address on some subject connected with the interests and objects of this Association.

SEC. 3. He shall appoint annually the requisite number of delegates to the American Medical Association, and to such other scientific bodies as it may be expedient to have this Association represented in.

SEC. 4. He shall appoint an orator, whose duty it shall be to prepare and deliver a public address on some subject connected with medicine, or the medical profession, at the next annual meeting after his appointment.

SEC. 5. He shall, in the intervals between the annual sessions, direct and control the general policy and business of the Association, but always with careful attention to the precedents and customary usage of the Association and to its constitutional provisions.

ARTICLE. VI.

VICE-PRESIDENTS.

SECTION 1. Vice-Presidents, in their order, shall, in case of the absence or the death of the President, discharge all the duties belonging to the presidential office.

ARTICLE VII.

SECRETARY.

SECTION 1. The Secretary shall have charge of all the books, papers and records of the Association, except those belonging to the office of Treasurer.

SEC. 2. He shall record the minutes of the Association at all its meetings.

SEC. 3. He shall conduct the correspondence of the Association under the direction of the President, and shall be Chairman of the Publishing Committee.

SEC. 4. He shall keep the roll of the members of this body who have retained their membership by compliance with the provisions of this Constitution, and also the names of those who have forfeited membership, together with the cause of such forfeiture.

SEC. 5. In the absence of the Treasurer he shall collect the usual dues of the members in attendance at the regular sessions.

SEC. 6. The necessary expense incurred by the Secretary in attending the annual sessions shall be defrayed out of the funds of the Association.

ARTICLE VIII.

TREASURER.

SECTION 1. The Treasurer shall collect the annual dues and have custody of all the moneys belonging to the Association, and shall respond to the calls of the Secretary, by order of the President, as far as he may have funds in his possession.

SEC. 2. He shall make annual reports of the financial condition of the Association, and the several amounts received during the year, and from whom; the several amounts due by the Association, if any, to whom, and on what account; the several amounts due to the Association, if any, by whom, and on what account.

SEC. 3. The necessary expense incurred by the Treasurer in attending the annual sessions shall be paid out of the funds of the Association.

ARTICLE IX.

CENSORS.

SECTION 1. The Board of Censors shall hold annual meetings concurrently with the annual sessions of the Association, to whom shall be referred all applications for membership, with vouchers from two members; and in such case their decision shall be reported to the body for action. Three of their number shall constitute a quorum, and the Chairman and Secretary shall be designated by the President.

SEC. 2. They shall take cognizance of all offences against the Association or its Code of Ethics, and shall be authorized to strike from the list of membership all violators of its regulations, and shall report the names of the individuals, and the offence from which action has been taken, immediately to the Association, at which time, or at

the next succeeding meeting, all such individuals may have the right to appeal to that body.

SEC. 3. In the event of a failure of a quorum of the Board of Censors to attend at any annual meeting, it shall be the duty of the President to supply the vacancy by a temporary appointment.

ARTICLE X.

FINANCES.

SECTION 1. Every member of the Association shall pay annually into the Treasury such sum as the Association may determine, which amount, it is expected, will be paid during the session of the body.

ARTICLE XI.

CONSTITUTION.

SECTION 1. The Constitution shall take immediate effect from its adoption.

SEC. 2. The By-Laws now in operation, and Order of Business, are adopted, so far as they agree with the new Constitution.

ARTICLE XII.

ANNUAL MEETING.

SECTION 1. The annual meetings shall take place on the third Wednesday in April, and at such place as shall be designated by a majority of the Association.

ARTICLE XIII.

AMENDMENTS.

SECTION 1. Any amendment that may be offered to the Constitution shall lie over until the next annual meeting; and for its adoption at such meeting shall require a two-thirds' vote of all present and voting.

BY-LAWS.

(ADOPTED 1875.)

ORDER OF BUSINESS.

The Order of Business of this body, unless ordered by a two-thirds' vote of the members, shall be as follows:

1. Calling the Association to order by the President, or, in case of his absence, by one of the Vice-Presidents.
2. Report of Committee of Arrangements.
3. President's Address.
4. Reading notes from absentees.
5. Election of members.
6. Reports of Special Committees.
7. Report of Committee on Publication.
8. Report of Committee on Necrology.
9. Report of Committee on Programme.
10. Voluntary Communications. [To be read by title and held subject to call of the Association.]
11. Selection of place for next annual meeting.
12. Unfinished business.
13. New business.
14. Installation of new officers.

Resolved, That the officers of the Association be elected by ballot, without a nomination, at eleven o'clock on the morning of the last day of the Association, and if there is no election on the first ballot, the three names receiving the highest number of ballots shall be voted on, the other names being dropped. If there is no election on second ballot, the two names receiving the highest number of ballots shall be voted on until an election is had.

STANDING COMMITTEES.

The Committee of Arrangements shall consist of five members who reside at the place selected for the ensuing meeting. It shall be their duty to provide suitable accommodations for the meetings of the Association, and to superintend the registration of members in attendance.

The Committee on Publication shall consist of four members in addition to the Secretary, who is Chairman *ex officio*. They shall provide for the publication of the minutes of the session, together with such papers as are deemed worthy. They shall also append to each volume of Transactions a copy of the Constitution and By-Laws of the Association, Roll of Membership, and Code of Ethics of the American Medical Association.

The Committee on Necrology shall consist of five members, whose duty it shall be to procure memorials of deceased members, and present them for publication in the Transactions.

ASSESSMENTS.

Each member shall pay annually to the Association such sums as the Association may determine.

OFFICERS—TIME OF ASSUMING THEIR DUTIES.

The Secretary and Treasurer shall enter upon the duties pertaining to their office at the time of their election; the President, Vice-President and Censors, at the commencement of the annual meeting succeeding their election.

AMENDMENTS.

I.

APPLICANTS FOR MEMBERSHIP.

The names of all applicants for membership shall first be presented to the Association in a body, and then referred to the Board of Censors. [See, also, Duties of Censors—Constitution, Article IX., Section 1.]

II.

INITIATION FEE.

An initiation fee of FIVE DOLLARS shall be required of every new member hereinafter elected to the Association; which fee must accompany the application for membership.

III.

ANNUAL ASSESSMENTS.

The annual assessment of every member of the Association shall be THREE DOLLARS.

IV.

MEMBERS IN ARREARS.

The name of any member who shall fail for two consecutive years to pay the annual assessment shall be dropped from the roll of membership, the Treasurer notifying such member of the state of his account.

V.

TREASURER'S CALL FOR DUES.

The Treasurer shall, immediately after the meeting of the Association, issue a call for the dues of absent mem-

bers, by postal card, impressing upon them the need of prompt payment of the small assessment herein provided, by every member of the Association, and notifying them of the constitutional provison requiring the names of delinquents to be stricken from the roll of membership by the Secretary.

VI.

LIFE-MEMBERSHIP.

The assessment for life-membership shall be THIRTY dollars, exempting from annual dues, the sum so received to be invested and the interest used to pay annual dues of said life-member. A member may hold as many life-memberships as he desires, and shall be entitled to one vote for each.

VII.

PAPERS AND PUBLICATIONS.

1. No paper shall be read before this Association, by title, or otherwise, until a complete copy of such paper shall have been placed in the hands of the Secretary for publication in the Transactions. This rule shall not prevent the publication of such paper in any medical journal, at any time.

2. No article shall be published in the Transactions until it shall have been recommended by the Committee on Publication.

3. Repeals all conflicting laws.

VIII.

AMENDMENTS.

Any change in these By-Laws can only be made by a vote of two-thirds of all the members present.

The Secretary desires to call attention to the following resolution which was adopted by the Association, in Augusta,

in 1886, and while it was not offered as an amendment to the By-laws, yet, if carried out, it would operate in that way. The resolution is as follows:

"*Resolved*, That the second day of the next and each subsequent session of this Association be set apart for omnibus discussion."

CODE OF MEDICAL ETHICS.

CHAPTER I.

OF THE DUTIES OF PHYSICIANS TO THEIR PATIENTS, AND OF THE OBLIGATIONS OF PATIENTS TO THEIR PHYSICIANS.

ARTICLE I.

DUTIES OF PHYSICIANS TO THEIR PATIENTS.

§ 1. A physician should not only be ever read to obey the calls of the sick, but his mind ought also to be imbued with the greatness of his mission, and the responsibility he habitually incurs in its discharge. Those obligations are the more deep and enduring, because there is no tribunal, other than his own conscience, to adjudge penalties for carelessness or neglect. Physicians should, therefore, minister to the sick with due impressions of the importance of their office; reflecting that the ease, the health, and the lives of those committed to their charge depend on their skill, attention and fidelity. They should study, also, in their deportment, so to unite *tenderness* with *firmness*, and *condescension* with *authority*, as to inspire the minds of their patients with gratitude, respect and confidence.

§ 2. Every case committed to the charge of a physician should be treated with attention, steadiness, and humanity. Reasonable indulgence should be granted to the mental imbecility and caprices of the sick. Secrecy and delicacy, when required by peculiar circumstances, should be strictly observed, and the familiar and confidential intercourse to which physicians are admitted in their professional visits should be used with discretion, and with the most scrupulous regard to fidelity and honor. The obligation of secrecy extends beyond the period of professional service; none of the privacies of personal and domestic life, no infirmity of disposition or flaw of character observed during professional

attendance, should ever be divulged by the physician, except when he is imperatively required to do so. The force and the necessity of this obligation are indeed so great that professional men have, under certain circumstances, been protected in their observance of secrecy by courts of justice.

§ 3. Frequent visits to the sick are in general requisite, since they enable the physician to arrive at a more perfect knowledge of the disease—to meet promptly every change which may occur, and also tend to preserve the confidence of the patient; but unnecessary visits are to be avoided, as they give useless anxiety to the patient, tend to diminish the authority of the physician, and to render him liable to be suspected of interested motives.

§ 4. A physician should not be forward to make gloomy prognostications, because they savor of empiricism, by magnifying the importance of his services in the treatment or cure of the disease. But he should not fail, on proper occasions, to give to the friends of the patient timely notice of danger when it really occurs; and even to the patient himself if absolutely necessary. This office, however, is so peculiarly alarming when executed by him, that it ought to be declined whenever it can be assigned to any other person of sufficient judgment and delicacy; for the physician should be the minister of hope and comfort to the sick; that, by such cordials to the drooping spirit he may smooth the bed of death, revive expiring life, and counteract the depressing influence of those maladies which often disturb the tranquillity of the most resigned in the last moments. The life of a sick person can be shortened, not only by the acts, but also by the words or the manner of a physician. It is, therefore a sacred duty to guard himself carefully in this respect, and to avoid all things which have a tendency to discourage the patient and depress his spirits.

§ 5. A physician ought not to abandon his patient because the case is deemed incurable; for his attendance may continue to be highly useful to the patient, and comforting to the relatives around him, even in the last period of a fatal malady, by alleviating pain and other symptoms, and by soothing mental anguish. To decline attendance under such circumstances, would be sacrificing to fanciful delicacy and mistaken liberality that moral duty,

which is independent of, and far superior to, all pecuniary consideration.

§ 6. Consultations should be promoted in difficult or protracted cases, as they give rise to confidence, energy, and more enlarged views in practice.

§ 7. The opportunity which a physician not unfrequently enjoys of promoting and strengthening the good resolutions of his patients, suffering under the consequences of vicious conduct, ought never to be neglected. His counsels, or even remonstrances, will give satisfaction, not offence if they be proffered with politeness and evince a genuine love of virtue, accompanied by a sincere interest in the welfare of the person to whom they are addressed.

ARTICLE II.

OBLIGATIONS OF PATIENTS TO THEIR PHYSICIANS.

§ 1. The members of the medical profession, upon whom is enjoined the performance of so many important and arduous duties towards the community, and who are required to make so many sacrifices of comfort, ease, and health for the welfare of those who avail themselves of their services, certainly have a right to expect and require that their patients should entertain a just sense of the duties which they owe to their medical attendants.

§ 2. The first duty of a patient is to select as his medical adviser one who has received a regular professional education. In no trade or occupation does mankind rely on the skill of an untaught artist; and in medicine, confessedly the most difficult and intricate of the sciences, the world ought not to suppose that knowledge is intuitive.

§ 3. Patients should prefer a physician whose habits of life are regular, and who is not devoted to company, pleasure, or any pursuit incompatible with his professional obligations. A patient should also confide the care of himself and family as much as possible to one physician; for a medical man who has become acquainted with the peculiarities of constitution, habits and predispositions of those he attends is more likely to be successful in his treatment than one who does not possess that knowledge.

A patient who has thus selected his physician should always apply for advice in what may appear to him trivial cases, for the most fatal results often supervene on the slightest accidents. It is of still more importance that he should apply for assistance in the forming stage of violent diseases; it is to a neglect of this precept that medicine owes much of the uncertainty and imperfection with which it has been reproached.

§ 4. Patients should faithfully and unreservedly communicate to their physicians the supposed cause of their disease. This is the more important, as many diseases of mental origin stimulate those depending on external causes, and yet are only to be cured by ministering to the mind diseased. A patient should never be afraid of thus making his physician his friend and adviser. He should always bear in mind that a medical man is under the strongest obligations of secrecy. Even the female sex should never allow feelings of shame or delicacy to prevent their disclosing the seat, symptoms, and causes of complaints peculiar to them. However commendable a modest reserve may be in the common occurrences of life, its strict observance in medicine is often attended with the most serious consequences, and the patient may sink under a painful and loathsome disease, which might have been readily prevented had timely intimation been given to the physician.

§ 5. A patient should never weary his physician with a tedious detail of events or matters not appertaining to his disease. Even as relates to his actual symptoms he will convey much more real information by giving clear answers to interrogatories, than by the most minute account of his own framing. Neither should he obtrude upon his physician the details of his business, nor the history of his family concerns.

§ 6. The obedience of a patient to the prescriptions of his physician should be prompt and implicit. He should never permit his own crude opinions as to their fitness to influence his attention to them. A failure in one particular may render an otherwise judicious treatment dangerous, and even fatal. This remark is equally applicable to diet, drink, and exercise. As patients become convalescent, they are very apt to suppose that the rules prescribed for them may be disregarded; and the consequence,

but too often, is a relapse. Patients should never allow themselves to be persuaded to take any medicine whatever that may be recommended to them by the self-constituted doctors and doctresses who are so frequently met with, and who pretend to possess infallible remedies for the cure of every disease. However simple some of their prescriptions may appear to be, it often happens that they are productive of much mischief, and in all cases they are injurious, by contravening the plan of treatment adopted by the physician.

§ 7. A patient should, if possible, avoid even the *friendly visits of a physician* who is not attending him, and when he does receive them, he should never converse on the subject of his disease, as an observation may be made, without any intention of interference, which may destroy his confidence in the course he is pursuing, and induce him to neglect the directions prescribed to him. A patient should never send for a consulting physician without the express consent of his own medical attendant. It is of great importance that physicians should act in concert; for, although their modes of treatment may be attended with equal success when employed singly, yet conjointly, they are very likely to be productive of disastrous results.

§ 8. When a patient wishes to dismiss his physician, justice and common courtesy require that he should declare his reasons for so doing.

§ 9. Patients should always, when practicable, send for their physicians in the morning, before his usual hour of going out; for, by being early aware of the visits he has to pay during the day, the physician is able to apportion his time in such a manner as to prevent an interference of engagements. Patients should also avoid calling on their medical advisers unnecessarily during the hours devoted to meals or sleep. They should always be in readiness to receive the visits of their physician, as the detention of a few minutes is often of serious inconvenience to him.

§ 10. A patient should, after his recovery, entertain a just and enduring sense of the value of the services rendered him by his physician; for these are of such a character, that no mere pecuniary acknowledgment can repay or cancel them.

CHAPTER II.

OF THE DUTIES OF PHYSICIANS TO EACH OTHER AND TO THE PROFESSION AT LARGE.

ARTICLE I.

DUTIES FOR THE SUPPORT OF PROFESSIONAL CHARACTER.

§ 1. Every individual, on entering the profession, as he becomes thereby entitled to all its privileges and immunities, incurs an obligation to exert his best abilities to maintain its dignity and honor, to exalt its standing, and to extend the bounds of its usefulness. He should, therefore, observe strictly such laws as are instituted for the government of its members; should avoid all contumelious or sarcastic remarks relative to the faculty as a body; and while, by unwearied diligence, he resorts to every honorable means of enriching the science, he should entertain a due respect for his seniors, who have, by their labors, brought it to the elevated condition in which he finds it.

§ 2. There is no profession, from the members of which greater purity of character, and a higher standard of moral excellence are required, than the medical; and to attain such eminence is a duty every physician owes alike to his profession and to his patients. It is due to the latter, as without it he cannot command their respect and confidence; and to both, because no scientific attainments can compensate for the want of correct moral principles. It is also incumbent upon the faculty to be temperate in all things, for the practice of physic requires the unremitting exercise of a clear and vigorous understanding; and on emergencies, for which no professional man should be unprepared, a steady hand, an acute eye, and an unclouded head may be essential to the well-being and even to the life of a fellow creature.

§ 3. It is derogatory to the dignity of the profession to resort to public advertisements or private cards, or handbills, inviting the attention of individuals affected with particular diseases—publicly offering advice and medicine to the poor gratis, or promising radical cures; or to publish cases or operations in the daily prints, or suffer such publications to be made; to invite laymen to be present at operations, to boast of cures and reme-

dies, to adduce certificates of skill and success, or to perform any other similar acts. These are the ordinary practices of empirics, and are highly reprehensible in a regular physician.

§ 4. Equally derogatory to professional character is it for a physician to hold a patent for any surgical instrument or medicine; or to dispense a secret *nostrum*, whether it be the composition or exclusive property of himself or others. For if such nostrum be of real efficacy, any concealment regarding it is inconsistent with beneficence and professional liberality; and if mystery alone gave it value and importance, such craft implies either disgraceful ignorance or fraudulent avarice. It is also reprehensible for physicians to give certificates attesting the efficacy of patent or secret medicines, or in any way to promote the use of them.

ARTICLE II.

PROFESSIONAL SERVICES OF PHYSICIANS TO EACH OTHER.

§ 1. All practitioners of medicine, their wives and their children, while under the paternal care, are entitled to the gratuitous services of any one or more of the faculty residing near them, whose assistance may be desired. A physician afflicted with disease is usually an incompetent judge of his own case, and the natural anxiety and solicitude which he experiences at the sickness of a wife, a child, or any one who, by the ties of consanguinity, is rendered peculiarly dear to him, tend to obscure his judgment, and produce timidity and irresolution in his practice. Under such circumstances, medical men are peculiarly dependent upon each other, and kind offices and professional aid should always be cheerfully and gratuitously afforded. Visits ought not, however, to be obtruded officiously, as such unasked civility may give rise to embarrassment, or interfere with that choice on which confidence depends. But, if a distant member of the family, whose circumstances are affluent, requests attendance, and an honorarium be offered, it should not be declined; for no pecuniary obligation ought to be imposed which the party receiving it would wish not to incur.

ARTICLE III.

OF THE DUTIES OF PHYSICIANS AS RESPECTS VICARIOUS OFFICES.

§ 1. The affairs of life, the pursuit of health, and the various accidents and contingencies to which a medical man is peculiarly exposed, sometimes require him temporarily to withdraw from his duties to his patients and to request some of his professional brethren to officiate for him. Compliance with this request is an act of courtesy, which should always be performed with the utmost consideration for the interest and character of the family physician, and when exercised for a short period all the pecuniary obligations for such service should be awarded to him. But if a member of the profession neglects his business in quest of pleasure and amusement he cannot be considered as entitled to the advantages of the frequent and long-continued exercise of this fraternal courtesy without awarding to the physician who officiates the fees arising from the discharge of his professional duties.

In obstetrical and important surgical cases, which give rise to unusual fatigue, anxiety and responsibility, it is just that the fees accruing therefrom should be awarded to the physician who officiates.

ARTICLE IV.

OF THE DUTIES OF PHYSICIANS IN REGARD TO CONSULTATIONS.

§ 1. A regular medical education furnishes the only presumptive evidence of professional abilities and acquirements, and ought to be the only acknowledged right of an individual to the exercise and honors of his profession. Nevertheless, as in consultations the good of the patient is the sole object in view, and this is often dependent on personal confidence, no intelligent, regular practitioner, who has a license to practice from some medical board of known and acknowledged respectability, recognized by the American Medical Association, and who is in good moral and professional standing in the place in which he resides, should be fastidiously excluded from fellowship, or his aid refused in consultation, when it is requested by the patient. But no one can be considered as a regular practitioner, or a fit asso-

ciate in consultation, whose practice is based on an exclusive dogma to the rejection of the accumulated experience of the profession, and of the aids actually furnished by anatomy, physiology, pathology, and organic chemistry.

§ 2. In consultations no rivalship or jealousy should be indulged. Candor, probity, and all due respect should be exercised toward the physician having charge of the case.

§ 3. In consultations the attending physician should be the first to propose the necessary questions to the sick; after which the consulting physician should have the opportunity to make such further inquiries of the patient as may be necessary to satisfy him of the true character of the case. Both physicians should then retire to a private place for deliberation, and the one first in attendance should communicate the directions agreed upon to the patient or his friends, as well as any opinions which it may be thought proper to express, but no statement or discussion of it should take place before the patient or his friends, except in the presence of all the faculty attending, and by their common consent; and no *opinions* or *prognostications* should be delivered which are not the result of previous deliberation and concurrence.

§ 4. In consultation, the physician in attendance should deliver his opinion first; and when there are several consulting, they should deliver their opinions in the order in which they have been called in. No decision, however, should restrain the attending physician from making such variations in the mode of treatment as any subsequent unexpected change in the character of the case may demand. But such variation and the reason for it ought to be carefully detailed at the next meeting in consultation. The same privilege belongs also to the consulting physician if he is sent for in an emergency, when the regular attendant is out of the way, and simular explanations must be made by him at the next consultation.

§ 5. The utmost punctuality should be observed in the visits of physicians when they are to hold consultation together; and this is generally practicable, for society has been considerate enough to allow the plea of a professional engagement to take precedence of all others, and to be an ample reason for the relin-

quishment of any present occupation; but, as professional engagements may sometimes interfere and delay one of the parties, the physician who first arrives should wait for his associate a reasonable period, after which the consultation should be considered as postponed to a new appointment. If it be the attending physician who is present, he will, of course, see the patient and prescribe, but if it be the consulting one, he should retire, except in case of emergency, or when he has been called from a considerable distance, in which latter case he may examine the patient and give his opinion in *writing* and *under seal*, to be delivered to his associate.

§ 6. In consultations, theoretical discussions should be avoided, as occasioning perplexity and loss of time, for there may be much diversity of opinion concerning speculative points, with perfect agreement in those modes of practice which are founded, not on hypothesis, but on experience and observation.

§ 7. All discussions in consultation should be held as secret and confidential. Neither by words nor manner should any of the parties to a consultation assert or insinuate that any part of the treatment pursued did not receive his assent. The responsibility must be equally divided between the medical attendants. They must equally share the credit of success, as well as the blame of failure.

§ 8. Should an irreconcilable diversity of opinion occur when several physicians are called upon to consult together, the opinion of the majority should be considered as decisive; but if the numbers be equal on each side, then the decision should rest with the attending physician. It may, moreover, sometimes happen that two physicians cannot agree in their views of the nature of a case and the treatment to be pursued. This is a circumstance much to be deplored, and should always be avoided, if possible, by mutual concessions as far as they can be justified by a conscientious regard for the dictates of judgment; but in the event of its occurrence, a third physician should, if practicable, be called to act as umpire; and if circumstances prevent the adoption of this course, it must be left to the patient to select the physician in whom he is most willing to confide; but as every physician relies upon the rectitude of his judgment, he should, when left in the

minority, politely and consistently retire from any further deliberation in the consultation, or participation in the management of the case.

§ 9. As circumstances sometimes occur to render a *special consultation* desirable, when the continued attendance of physicians might be objectionable to the patient, the member of the faculty whose assistance is required in such cases should sedulously guard against all future unsolicited attendance. As such consultations require an extraordinary portion both of time and attention, at least a double honorarium may be reasonably expected.

§ 10. A physician who is called upon to consult, should observe the most honorable and scrupulous regard for the character and standing of the practitioner in attendance; the practice of the latter, if necessary, should be justified as far as it can be, consistently with a conscientious regard for truth, and no hint or insinuation should be thrown out which could impair the confidence reposed in him or affect his reputation. The consulting physician should also carefully refrain from any of those extraordinary attentions or assiduities which are too often practiced by the dishonest for the base purpose of gaining applause, or ingratiating themselves into the favor of families and individuals.

ARTICLE V.

DUTIES OF PHYSICIANS IN CASES OF INTERFERENCE.

§ 1. Medicine is a liberal profession, and those admitted into its ranks should found their expectations of practice upon the extent of their qualifications—not on intrigue or artifice.

§ 2. A physician, in his intercourse with a patient under the care of another practitioner, should observe the strictest caution and reserve. No meddling inquiries should be made—no disingenuous hints given relative to the nature and treatment of his disorder; nor any course of conduct pursued that may directly or indirectly tend to diminish the trust reposed in the physician employed.

§ 3. The same circumspection and reserve should be observed when, from motives of business or friendship, a physician is prompted to visit an individual who is under the direction of another practitioner. Indeed, such visits should be avoided,

except under peculiar circumstances; and when they are made, no particular inquiries should be instituted relative to the nature of the disease, or the remedies employed, but the topics of conversation should be as foreign to the case as circumstances will admit.

§ 4. A physician ought not to take charge of, or prescribe for, a patient who has recently been under the care of another member of the faculty in the same illness, except in cases of sudden emergency; or in consultation with the physician previously in attendance, or when the latter has relinquished the case, or been regularly notified that his services are no longer desired. Under such circumstances no unjust or illiberal insinuations should be thrown out in relation to the conduct or practice previously pursued, which should be justified as far as candor and regard for truth and probity will permit; for it often happens that patients become dissatisfied when they do not experience immediate relief, and, as many diseases are naturally protracted, the want of success, in the first stage of treatment, affords no evidence of a lack of professional knowledge and skill.

§ 5. When a physician is called to an urgent case, because the family attendant is not at hand, he ought, unless his assistance in consultation be desired, to resign the care of the patient to the latter immediately on his arrival

§ 6. It often happens, in cases of sudden illness or of recent accidents and injuries, owing to the alarm and anxiety of friends, that a number of physicians are simultaneously sent for. Under these circumstances courtesy should assign the patient to the first who arrives, who should select from those present any additional assistance that he may deem necessary. In all such cases, however, the practitioner who officiates should request the family physician, if there be one, to be called, and, unless his further attendance be requested, should resign the case to the latter on his arrival.

§ 7. When a physician is called to the patient of another practitioner, in consequence of the sickness or absence of the latter, he ought, on the return or recovery of the regular attendant, and with the consent of the patient, to surrender the case.

[The expression, "patient of another practitioner," is under-

stood to mean a patient who may have been under the charge of another practitioner at the time of the attack of sickness, or departure from home of the latter, or who may have called for his attendance during his absence or sickness, or in any manner given it to be understood that he regarded the said physician as his regular medical attendant.]

§ 8. A physician, when visiting a sick person in the country, may be desired to see a neighboring patient who is under the regular direction of another physician, in consequence of some sudden change or aggravation of symptoms. The conduct to be pursued on such an occasion, is to give advice adapted to present circumstances; to interfere no further than is absolutely necessary with the general plan of treatment; to assume no further direction, unless it be expressly desired; and, in this last case, to request an immediate consultation with the practitioner previously employed.

§ 9. A wealthy physician should not give advice *gratis* to the affluent; because his doing so is an injury to his professional brethren. The office of physician can never be supported as an exclusively beneficent one; and it is defrauding, in some degree, the common funds for its support, when fees are dispensed with which might justly be claimed.

§ 10. When a physician who has been engaged to attend a case of midwifery is absent, and another is sent for, if delivery is accomplished during the attendance of the latter, he is entitled to the fee, but should resign the patient to the practitioner first engaged.

ARTICLE VI.

OF DIFFERENCES BETWEEN PHYSICIANS.

§ 1. Diversity of opinion and opposition of interest may, in the medical, as in other professions, sometimes occasion controversy, and even contention. Whenever such cases unfortunately occur, and cannot be immediately terminated, they should be referred to the arbitration of a sufficient number of physicians, or a *court-medical.*

§ 2. As a peculiar reserve must be maintained by physicians towards the public, in regard to professional matters, and as

there exist numerous points in medical ethics and etiquette through which the feelings of medical men may be painfully assailed in their intercourse with each other, and which cannot be understood or appreciated by general society, neither the subject matter of such differences, nor the adjudication of arbitrators should be made public, as publicity in a case of this nature may be personally injurious to the individals concerned, and can hardly fail to bring discredit on the faculty.

ARTICLE VII.

OF PECUNIARY ACKNOWLEDGMENTS.

§ 1. Some general rules should be adopted by the faculty in every town or district, relative to *pecuniary acknowledgments* from their patients; and it should be deemed a point of honor to adhere to these rules with as much uniformity as varying circumstances will admit.

CHAPTER III.

OF THE DUTIES OF THE PROFESSION TO THE PUBLIC, AND OF THE OBLIGATIONS OF THE PUBLIC TO THE PROFESSION.

ARTICLE I.

DUTIES OF THE PROFESSION TO THE PUBLIC.

§ 1. As good citizens, it is the duty of physicians to be ever vigilant for the welfare of the community, and to bear their part in sustaining its institutions and burdens; they should also be ever ready to give counsel to the public in relation to matters especially appertaining to their profession, as on subjects of medical police, public hygiene, and legal medicine. It is their province to enlighten the public in regard to quarantine regulations, the location, arrangement, and dietaries of hospitals, asylums, schools, prisons, and similar institutions; in relation to the medical police of towns, as drainage, ventilation, etc., and in regard to measures for the prevention of epidemic and contagious diseases; and when pestilence prevails, it is their duty to face the danger, and to continue their labors for the alleviation of the suffering, even at the jeopardy of their own lives.

§ 2. Medical men should also be always ready, when called on by the legally constituted authorities to enlighten coroners' inquests and courts of justice, on subjects strictly medical, such as involve questions relating to sanity, legitimacy, murder by poison, or other violent means, and in regard to the various other subjects embraced in the science of Medical Jurisprudence. But in these cases, and especially where they are required to make a *post mortem* examination, it is just, in consequence of the time, labor, and skill required, and the responsibility and risk they incur, that the public should award them a proper honorarium.

§ 3 There is no profession by the members of which eleemosynary services are more liberally dispensed than the medical, but justice requires that some limit should be placed to the performance of such good offices. Poverty, professional brother-

hood, and certain of the public duties referred to in the first section of this article should always be recognized as presenting valid claims for gratuitous services; but, neither institutions endowed by the public, or by rich individuals, societies for mutual benefit, for the insurance of lives or for analogous purposes, nor any profession or occupation, can be admitted to possess such privilege. Nor can it be justly expected of physicians to furnish certificates of inability to serve on juries, to perform militia duty, or to testify to the state of health of persons wishing to insure their lives, obtain pensions, or the like, without pecuniary acknowledgment. But to individuals in indigent circumstances, such professional services should always be cheerfully and freely accorded.

§ 4. It is the duty of physicians who are frequent witnesses of the enormities committed by quackery and the injury to health, and even destruction of life, caused by the use of quack medicines, to enlighten the public on these subjects, to expose the injuries sustained by the unwary from the devices and pretensions of artful empirics and impostors. Physicians ought to use all the influence which they may possess, as professors in Colleges of Pharmacy, and by exercising their option in regard to the shops to which their prescriptions shall be sent, to discourage druggists and apothecaries from vending quack or secret medicines, or from being in any way engaged in their manufacture and sale.

ARTICLE II.

OBLIGATIONS OF THE PUBLIC TO PHYSICIANS.

§ 1. The benefits accruing to the public, directly or indirectly, from the active and unwearied beneficence of the profession, are so numerous and important, that physicians are justly entitled to the utmost consideration and respect from the community. The public ought likewise to entertain a just appreciation of medical qualifications; to make a proper discrimination between true science and the assumption of ignorance and empiricism—to afford every encouragement and facility for the acquisition of medical education—and no longer to allow the

statute-books to exhibit the anomaly of exacting knowledge from physicians, under a liability to heavy penalties, and of making them obnoxious to punishment for resorting to the only means of obtaining it.

Resolved, That this Association recognize Specialties as proper and legitimate fields of practice.

Resolved, That Specialties shall be governed by the same rules of professional etiquette as have been laid down for general practitioners.

Resolved, That it shall not be proper for the Specialists publicly to advertise themselves as such, or assume any title not specially granted by a regularly chartered college.

ROLL OF MEMBERS

OF THE

Medical Association of Georgia.

1895.

ARRANGED ALPHABETICALLY.

ABBREVIATIONS—P., President; V-P., Vice-President; S., Secretary; C. S., Corresponding Secretary; T., Treasurer; O., Orator; C., Censor; indicating the offices the members hold or have held.

Members are particularly requested to notify the Secretary promptly on making any changes in their postoffices.

The Secretary will esteem it a favor if any member will write him at once on noticing any inaccuracy or omission in the roll.

Name.	Postoffice.	County.	Admitted.
Adams, Wm. E	Greensboro	Greene	1891
Aikin, W. F	Savannah	Chatham	1895
Allen, H. D	Milledgeville	Baldwin	1891
Allen, Jos. E	Augusta	Richmond	1895
Alexander, G. L	Forsyth	Monroe	1894
Amster, L	Atlanta	Fulton	1894
Anderson, Newt	Eudora	Jasper	1894
Anthony, E. R. (V-P)	Griffin	Spalding	1887
Armstrong, W. S	Atlanta	Fulton	1886
Asbury, J. C	Greensboro	Greene	1891
Avant, A. L. R	Patterson	Pierce	1895
Avary, Arch	Atlanta	Fulton	1887
Avary, J. C	Atlanta	Fulton	1889
Bacon, W. W	Albany	Dougherty	1890
Bailey, J. W	Gainesville	Hall	1861
Baird, James B. (S., O.)	Atlanta	Fulton	1872
Baldwin, M. A	Cuthbert	Randolph	1890
Bardwell, E. L	Talbotton	Talbot	1872

Name.	Postoffice.	County.	Admitted.
Battle, H. L	Wadley	Jefferson	1891
Barnum, R. E. L	Savannah	Chatham	1892
Barron, R. B	Macon	Bibb	1884
Battey, H. H	Rome	Floyd	1882
Battey, Robert (C., P.)	Rome	Floyd	1859
Battey, W. W	Augusta	Richmond	1876
Beasley, James A	West Point	Troup	1884
Bedingfield, S. T	Union	Stewart	1894
Bell, A. K	Madison	Morgan	1889
Belt, L. J	Herndon	Burke	1888
Benedict, Samuel C. (O.)	Athens	Clarke	1883
Bivins, R. T	Ellaville	Schley	1893
Bizzell, B. W	Atlanta	Fulton	1894
Black, A. H	Thomaston	Upson	1893
Blain, Arthur C	Macon	Bibb	1890
Blanton, G. W	Brunswick	Glynn	1893
Blalock, W. J	Atlanta	Fulton	1894
Bloomfield, James C	Athens	Clarke	1890
Bosworth, Don B	Atlanta	Fulton	1894
Boyd, Montague L	Savannah	Chatham	1889
Boyd, A. F	Iric	Bulloch	1891
Bozeman, E. K	Friendship	Sumter	1892
Brigham, J. C	Girard	Burke	1891
Brown, George	Atlanta	Fulton	1894
Brooks, C. A	Americus	Sumter	1888
Brown, M. S	Fort Valley	Houston	1894
Brown, H. A	Fort Valley	Houston	1891
Brown, S. E	Eatonton	Putnam	1890
Bruce, W. W	Thomasville	Thomas	1881
Bruce, W. W	Hamilton	Harris	1892
Bryans, R. G	Jackson	Henry	1890
Bryan, J. A	Gillsville	Hall	1894
Bryan, James H	Belleview	Talbot	1892
Bryant, W. J	Summerville	Chattooga	1892
Buford, O. H	Cartersville	Bartow	1891
Bullard, W. L	Columbus	Muscogee	1882
Burdett, J. R	Tennille	Washington	1889
Burford, R. E. L	Brunswick	Glynn	1890
Burford, H	Brunswick	Glynn	1888
Bush, E. B	Colquitt	Milner	1895
Butler, P. M	Atlanta	Fulton	1894
Butts, R. M	Gordon	Wilkinson	1892
Calhoun, A. T	Cartersville	Bartow	1894
Calhoun, A. W. (V-P., C., P)	Atlanta	Fulton	1874

Name.	Postoffice.	County.	Admitted.
Calhoun, F. R., (V-P.)	Cartersville	Bartow	1873
Callaway, J. A.	Milledgeville	Baldwin	
Calloway, E.	LaGrange	Troup.	1895
Campbell, J. L.	Atlanta	Fulton	1894
Cato, F. L.	DeSoto	Sumter	1893
Cato, R. E.	Americus	Sumter	1893
Champion, W. L.	Atlanta	Fulton	1894
Chappell, Roy J.	Dublin	Laurens	1890
Charlton, T. J.	Savannah	Chatham	1887
Chason, I. D.	Iron City	Decatur	1895
Chason, Thos.	Donaldsonville	Decatur	1895
Cheatham, W. B.	Dawson	Terrell	1880
Childs, J. A.	Atlanta	Fulton	1894
Cickey, D. C.	Macon	Bibb	1894
Clark, M. A.	Barnesville	Pike	1893
Clark, P. S.	Darien	McIntosh	1890
Colding, C. H.	Savannah	Chatham	1882
Cole, J. F.	Carrollton	Carroll	1884
Coleman, Thomas D.	Augusta	Richmond	1891
Collins, Katharine R.	Atlanta.	Fulton	1894
Comas, P. H.	Baxley	Appling	1889
Connally, E. L. (C.).	Atlanta	Fulton	1860
Cortelyou, P. R. (V.-P.)	Marietta	Cobb	1887
Corson, E. R.	Savannah	Chatham	1895
Corss, J. Kennedy	Atlanta	Fulton	1894
Cooper, Hunter P.	Atlanta	Fulton	1894
Cotter, R. O.	Macon	Bibb	1882
Coursey, W. D.	Lyons	Tattnall	1894
Cox, W. J.	Flovilla	Butts	1894
Crawford, A. H.	Abbeville	Wilcox	1893
Crawford, J. M.	Atlanta	Fulton	1888
Crawford, O. G.	Sasser	Terrell	1893
Croley, John G.	Milledgeville	Baldwin	1893
Crozier, J. H.	Cedar Springs	Early	1889
Crow, W. A.	Atlanta	Fulton	1892
Currie, M. L.	Mt. Vernon	Glynn	1890
Culpepper, W. F.	Senoia	Coweta	1892
Crumley, W. F.	Oglethorpe	Macon	1892
Cox, Ross P.	Rome	Floyd	1891
Darby, J. I.	Americus	Sumter	1893
Danforth, A. R.	Atlanta	Fulton	1894
Davidson, A. C.	Sharon	Taliaferro	1887
Davis, E. C.	Atlanta	Fulton	1894
Davis, Jeff.	Toccoa	Habersham	1893

Name.	Postoffice.	County.	Admitted.
Davis, Wm. L.	Albany	Dougherty	1893
Davis, T. B.	Newnan	Coweta	1892
Darden, N. M.	Norwood	Warren	1891
Deadwyler, M. P. (V.-P.)	Elberton	Elbert	1868
Dean, W. L.	Woodstock	Cherokee	1894
Dean, J. G.	Dawson	Terrell	1889
Divine, K. C.	Atlanta	Fulton	1882
Doster, B. R. (V.-P.)	Blakely	Early	1873
Doughty, W. H. (C.)	Augusta	Richmond	1857
Doughty, W. H., Jr.	Augusta	Richmond	1880
Douglass, J. E.	Cuthbert	Randolph	1889
Dozier, R. T.	Coleman	Randolph	1893
Drewry, S. E	Griffin	Spalding	1892
Dudley, M. J.	Sonoraville	Gordon	1880
Duggan, J. H.	Stephensville	Wilkinson	1884
Duncan, J. W.	Atlanta	Fulton	1883
Duncan, William	Savannah	Chatham	1868
Dunwoody, J. A. (V.-P.)	Brunswick	Glynn	1888
Earnest, J. G.	Atlanta	Fulton	1882
Elkin, W. S	Atlanta	Fulton	1882
Elliott, W. H. (P.)	Savannah	Chatham	1884
England, W. G.	Cedartown	Polk	1886
Eve, Robert C.	Augusta	Richmond	1894
Felder, L. A.	Atlanta	Fulton	1894
Field, J. C.	Oglethorpe	Macon	1889
Fitts, W. L.	Carrollton	Carroll	1890
Folks, G. P.	Waycross	Ware	1890
Foster, Eugene (V.-P., C., P.)	Augusta	Richmond	1875
Freeman, S. H.	Dacula	Gwinnett	1891
Fulcher, M. O.	Waynesboro	Burke	1895
Gantier, W. T.	Columbus	Muscogee	1892
Garlington, T. R.	Rome	Floyd	1893
Gaulden, Samuel S.	Quitman	Brooks	1892
Gann, Wm. F.	Columbus	Muscogee	1891
Garland, J. T.	Hillsboro	Jasper	1889
Gaston, J. McF.	Atlanta	Fulton	1884
Gaston, J. McF., Jr.	Atlanta	Fulton	1894
Gay, D. E.	Sidney	Emanuel	1875
Gerdine, John (C., V.-P.)	Athens	Clarke	1882
Gheesling, J. H.	Greensboro	Greene	1891
Gilmer, Wm. B.	Macon	Bibb	1893
Gill, H. L.	Atlanta	Fulton	1894
Goldin, W. F.	Drake Town	Haralson	1894

Name.	Postoffice.	County.	Admitted.
Goldsmith, W. S	Atlanta	Fulton	1893
Goodrich, E. C. (T.)	Augusta	Richmond	1876
Googe, W. R	Abbeville	Wilcox	1892
Goss, I. H	Athens	Clarke	1877
Grandy, L. B	Atlanta	Fulton	1893
Green, C. C	Atlanta	Fulton	1887
Green, J. E	Augusta	Richmond	1892
Greenwood, T. M	Mineral Bluff	Fannin	1894
Goolsby, R. C	Juliette	Monroe	1891
Green, S. H	Oakdale	Fulton	1892
Griffin, C. F	Cassville	Bartow	1888
Griggs, A. W. (O., V-P., C., P.)	West Point	Troup	1866
Griggs, R. E	Columbus	Muscogee	1892
Griggs, J. W	West Point	Troup	1892
Grimes, George J. (V.P.)	Columbus	Muscogee	1872
Ham, E. P	Gainesville	Hall	1892
Hamilton, C	Rome	Floyd	1894
Hammond, R. A	Logansville	Walton	1894
Haines, A. S	Elberton	Elbert	1895
Hallum, J. W	Carrollton	Carroll	1891
Harrington, A. L	West Point	Troup	1892
Hagan, Hugh	Atlanta	Fulton	1892
Harbin, R. M	Calhoun	Gordon	1894
Hardman, L. G	Harmony Grove	Jackson	1877
Hardman, W. B	Harmony Grove	Jackson	1892
Hardon, Virgil O. (O.)	Atlanta	Fulton	1886
Harris, R. B	Savannah	Chatham	1885
Harris, N. O	Atlanta	Fulton	1887
Harris, E. A	Burke	Midville	1893
Harrison, W. H., Jr.	Augusta	Richmond	1886
Hart, C. C	Cross Keys	DeKalb	1888
Hatchett, J. M	Fort Gaines	Clay	1892
Hawkins, A. M. F	Ball Ground	Cherokee	1891
Head, J. M	Zebulon	Pike	1883
Heard, J. H	Walden	Bibb	1884
Henderson, J. R	Sun Hill	Washington	1884
Herrman, J. D	Eastman	Dodge	1884
Hickman, C. W	Augusta	Richmond	1891
Hiers, J. L	Savannah	Chatham	1895
Hill, J. J	Washington	Wilkes	1880
Hillsman, P. L	Albany	Dougherty	1871
Hobbs, A. G	Atlanta	Fulton	1882
Hogg, J. N	West Point	Troup	1892

Name.	Postoffice.	County.	Admitted.
Holliday, W. Z	Augusta	Richmond	1884
Holmes, J. B. S. (V-P., P.)	Atlanta	Fulton	1872
Holt, W. F. (V-P., P.)	Macon	Bibb	1867
Hopkins, T. S	Thomasville	Thomas	1865
Hopkins, J. G	Thomasville	Thomas	1890
Horine, George S	Americus	Sumter	1893
Horrocks, J. Marion	Thomasville	Thomas	1893
Horsley, J. S	West Point	Troup	1894
Howell, Dan H. (S.)	Atlanta	Fulton	1878
Hood, J. W	Atlanta	Fulton	1894
Hull, J. M. (V-P.)	Augusta	Richmond	1882
Humphries, W. C	Acworth	Cobb	1890
Humphries, J. R	Acworth	Cobb	1876
Hurt, Charles D	Atlanta	Fulton	1890
Hutchins, M. B	Atlanta	Fulton	1892
Jelks, N. P	Hawkinsville	Pulaski	1882
Jefferson, Wesley	Buena Vista	Marion	1892
Johnson, J. C	Macon	Bibb	1875
Johnson, C. Evans	Atlanta	Fulton	1892
Johnson, L. M	Rowland	Upson	1893
Johnson, J. C	Atlanta	Fulton	1894
Jones, Louis H	Atlanta	Fulton	1890
Jones, L. M	Milledgeville	Baldwin	1880
Jones, R. D	Summerville	Chattooga	1892
Jones, T. S	Jeffersonville	Twiggs	1893
Jordan, Seth N	Columbus	Muscogee	1892
Keaton, P. H	Damascus	Early	1889
Kelly, J. M	Griffin	Spalding	1885
Kelley, T. J	Indian Springs	Butts	1884
Kendrick, W. S. (O.)	Atlanta	Fulton	1874
Kendrick, R. T	Allapaha	Berrien	1891
Kime, R. R	Atlanta	Fulton	1892
Kenyon, O. T	Weston	Webster	1892
Lancaster, J. F	Forsyth	Monroe	1884
LeHardy, J. C. (T., V-P.)	Savannah	Chatham	1868
Lockhardt, V. D	Homer	Banks	1891
Logan, A. J	Roney	Sumter	1882
Lowe, J. P	Stillmore	Emanuel	1895
Love, T. D	Atlanta	Fulton	1887
Lovvoon, J. L	Bowden	Carroll	1894
Mallory, R. A	Concord	Pike	1893
Maloy, W. C	Rhine	Dodge	1893

Name.	Postoffice.	County.	Admitted.
Maloy, John K	Milan	Telfair	1890
Manderville, J. T.	Cuthbert	Randolph	1894
Mathis, A	Macon	Bibb	1872
Mathews, W. J.	Zetella	Spalding	1892
Matthews, S. M.	Quitman	Brooks	1890
Malone, J. D	Marietta	Cobb	1891
Martin, J. D.	Savannah	Chatham	1894
May, W. F	Savannah	Chatham	1894
McDonald, C. M.	Leesburg	Lee	1892
McDuffie, James H	Columbus	Muscogee	1893
McHatton, H. (c., v-p.)	Macon	Bibb	1883
McIntosh, T. M	Thomasville	Thomas	1874
McIntosh, P. A	Thomasville	Thomas	1893
McKinnon, J. K	Whiteoak	Camden	1895
McKown, J. A	Jonesboro	Clayton	1891
McKown, T. D.	Chickamauga	Walker	1887
McLeod, R. D	Lyons	Montgomery	1893
McMaster, H. B	Waynesboro	Burke	1888
McMaster, D. E.	Munnerlyn	Burke	1894
McRae, A. B	Seville	Wilcox	1893
McRae, C. D.	Rochelle	Wilcox	1893
McRae, F. W.	Atlanta	Fulton	1887
Merritt, Thos. M.	Calvary	Decatur	1895
Miller, R. L	Hephzibah	Richmond	1891
Mitchell, Thomas E	Columbus	Muscogee	1892
Miller, G. T. (v.-p.)	Americus	Sumter	1892
Montgomery, Chas. J	Augusta	Richmond	1895
Monroe, Henry S.	Ellaville	Schley	1893
Moore, K. P. (v.-p., p., s.o.t.)	Macon	Bibb	1871
Mooney, H. R	Hagan	Bryan	1891
Moran, C. A	Atlanta	Fulton	1895
Mooreland, A. C	Forsyth	Monroe	1892
Morgan, J. B.	Augusta	Richmond	1891
Mobley, H. A.	Byronville	Dooly	1891
Mulligan, G. W. (v.-p., p.)	Washington	Wilkes	1883
Neal, J. W.	Scotland	Telfair	1892
Nicolson, Wm. Perrin	Atlanta	Fulton	1883
Nichols, D. N.	Laston	Bulloch	1891
Niles, Geo. M.	Marshallville	Macon	1893
Nisbet, D. B.	Eatonton	Putnam	1894
Noble, G. H.	Atlanta	Fulton	1883
Nunn, R. J. (c., v.-p., p.)	Savannah	Chatham	1867
O'Daniel, Mark H. (o.,c.,v.-p.)	Macon	Bibb	1882

Name.	Postoffice.	County.	Admitted.
O'Daniel, William (T., P.)	Bullard.	Twiggs	1870
O'Daniel, W. A. (O.)	Milledgeville	Baldwin	1886
Owens, W. W	Savannah	Chatham	1891
Patten, W. L	Milltown	Berrien	1895
Patterson, F. D	Lumpkin	Stewart	1892
Patterson, J. C	Milledgeville	Baldwin	1894
Parks, W. B	Atlanta	Fulton	1882
Pattillo, John T	West Point	Troup	1892
Paige, John D	Savannah	Chatham	1892
Payne, George F	Atlanta	Fulton	1894
Peete, C. H	Macon	Bibb	1893
Pendergrass, J. B	Jefferson	Jackson	1883
Perdue, H	Barnesville	Pike	1889
Petrie, C. B	Athens	Clarke	1894
Phillips, S. Latimer	Savannah	Chatham	1890
Pierce, B. S	Savannah	Chatham	1895
Poland, S. B	Griswoldville	Jones	1891
Ponder, W. P	Forsyth	Monroe	1885
Powell, T. O. (P.)	Milledgeville	Baldwin	1867
Powell, John F	Kramer	Wilcox	1893
Poole, W. H	Douglasville	Douglas	1894
Poore, J. J	Monroe	Walton	1894
Purse, M. A	Atlanta	Fulton	1894
Quarterman, K. A	Walthourville	Liberty	1885
Quillian, H. P	Arp	Banks	1888
Quillian, D. D	Athens	Clarke	1892
Quinn, C. T	Naylor	Lowndes	1893
Ramsaur, D. H	Rome	Floyd	1888
Read, J. B	Savannah	Chatham	1851
Rhodes, P. M	Taylorville	Bartow	1894
Richardson, C. H	Montezuma	Macon	1886
Richardson, E. H. (O., C., V.-P.)	Atlanta	Fulton	1878
Ridding, J. H	Waycross	Ware	1893
Ridley, F. M. (O., C.)	LaGrange	Troup	1887
Ridley, R. B	Atlanta	Fulton	1887
Roberts, J. B. (V.-P)	Sandersville	Washington	1875
Rogers, W. T	Coleman	Randolph	1893
Rowland, A. A	Brunswick	Glynn	1890
Rose, E. P	Valdosta	Lowndes	1893
Roy, G. G	Atlanta	Fulton	1878
Roy, Dunbar	Atlanta	Fulton	1892
Royal, A. R	Abbeville	Wilcox	1892

Name.	Postoffice.	County.	Admitted.
Ross, James T	Macon	Bibb	1891
Roper, L. E	Lula	Hall	1894
Rumble, S	Goggins	Monroe	1891
Scarborough, J. F	Tippettville	Dooly	1893
Scott, H. F. (o.)	Atlanta	Fulton	1879
Selman, J. L	Douglasville	Douglas	1894
Sessoms, W. C	Nicholls	Coffee	1893
Sewell, J. R	Erastus	Banks	1894
Shannon, John R	Cabaniss	Monroe	1893
Shepard, Chas. C	Savannah	Chatham	1895
Shorter, James H	Macon	Bibb	1893
Singleton, O. G	Fort Valley	Houston	1892
Sibbett, W. F	Broxton	Coffee	1890
Simpson, W. T	Smithville	Lee	1892
Simpson, J. R	Atlanta	Fulton	1894
Simmons, A. B	Savannah	Chatham	1891
Sims, J. H	Columbus	Muscogee	1892
Sims, J. C	Columbus	Muscogee	1892
Slack, Henry R	LaGrange	Troup	1893
Smith, A. A. (V.-P., P.)	Hawkinsville	Pulaski	1875
Smith, B. F	Elberton	Elbert	1893
Smith, C. H	Ellaville	Schley	1893
Smith, H. J	Blackshear	Pierce	1887
Smith, C. D	Atlanta	Fulton	1894
Solomon, J. C	Flovilla	Butts	1884
Sorrells, R. P	Athens	Clarke	1887
Spence, J. M., Jr	Waresboro	Ware	1890
Spears, W. T	Rutledge	Morgan	1894
Spier, C. P	Wadley	Jefferson	1886
Standifer, W. B	Blakely	Early	1886
Stephens, L. P	Atlanta	Fulton	1888
Stewart, J. F	Griffin	Spalding	1892
Stewart, W. W	Columbus	Muscogee	1892
Stevens, V. P	Putnam	Marion	1892
Stone, George H	Savannah	Chatham	1875
Stovall, A. S. J	Elberton	Elbert	1886
Stovall, G. M	Elberton	Elbert	1894
Strother, William A	Albany	Dougherty	1867
Sullivan, J. S	Macon	Bibb	1893
Taliaferro, V. H	Atlanta	Fulton	1894
Tankersley, J. S	Ellijay	Gilmer	1894
Tate, William B. (V.-P.)	Tate	Pickens	1890
Taylor, A. P	Thomasville	Thomas	1873

Name.	Postoffice.	County.	Admitted.
Taylor, J. P.	Haralson	Coweta	1859
Taylor, R. H. (v.-p.)	Griffin	Spalding	1879
Tarver, F. E.	Augusta	Richmond	1891
Terrell, H. W.	Glenwood	Meriwether	1892
Terrell, W. W.	Greenwood	Montgomery	1893
Thomas, F. B.	Americus	Sumter	1893
Thomas, J. M.	Atlanta	Fulton	1894
Thompson, P. H.	Bluffton	Clay	1886
Todd, J. S. (o., c., p.)	Atlanta	Fulton	1872
Trimble, G. C.	Bullard	Twiggs	1891
Tye, R. L.	McDonough	Henry	1887
Tyson, J. D.	Andrian	Emanuel	1893
Van Goidtsnoven, E.	Atlanta	Fulton	1887
Vanhorne, J. T.	Monroe	Walton	1892
Walker, W. F.	Dranesville	Marion	1892
Walker, J. L.	Waycross	Ware.	1882
Wall, H. A.	Bronwood	Terrell	1892
Wallace, F. R.	Cordele	Dooly	1895
Weaver, J. D.	Eatonton	Putnam	1894
Weaver, J. A.	Buena Vista	Marion	1890
Webb, C. S.	Atlanta	Fulton	1892
Wegefarth, J. A. W.	Savannah	Chatham	1894
Welchel, John E.	Gillsville	Hall	1891
Westmoreland, W. F. (o., p.)	Atlanta	Fulton	1881
Whelchel, C. C.	Comer	Hall	1891
Whitaker, J. M.	Milledgeville	Baldwin	1883
Whitehead, A. G. (v.-p.)	Waynesboro	Burke	1861
Wills, T. J.	Danielsville	Madison	1889
Williams, W. P.	Waycross	Ware	1890
Williams, H. J. (o.)	Macon	Bibb	1880
Williams, G. B.	Tallokas	Brooks	1893
Wilcox, G. A.	Augusta	Richmond	1892
Wimberly, John	Sanford	Stewart	1891
Winchester, E. A.	Desoto	Sumter	1893
Winchester, J. H.	Americus	Sumter	1893
Winchester, W. R.	Macon	Bibb	1883
Wise, B. T.	Plains	Sumter	1893
Wolff, Bernard	Atlanta	Fulton	1894
Wood, W. E.	Dalton	Whitfield	1891

NON-RESIDENTS.

Pery, Thomas B., U. S. Marine Hosp. Sr.,	Fortress Monroe,	Va.	1891
Gann, Dewell	Benton	Arkansas	1887
Prather, W. B	Scale	Alabama	1894
Glass, J. M	Opelika	Alabama	1894

HONORARY LIST.

This list is designed for aged, retired, or infirm members of the Association who are entitled to all the privileges of the Association without the payment of dues.

The Secretary would be obliged to members to report any names that should go on this list.

Name.	Postoffice.	County.	Admitted.
Alexander, J. F. (P., C., V.-P.).	Atlanta	Fulton	1849
Beasley, ——	West Point	Troup	1849
Bell, A. A	Madison	Morgan	1858
Brantley, S. D	Sandersville	Washington	1849
Brawner, W. M	Lexington	Oglethorpe	1883
Coleman, J. T	Perry	Houston	1851
Griggs, A. W. (O., V.-P., C., P.).	West Point	Troup	1866
Hopkins, T. S	Thomasville	Thomas	1865
Hoyt, W. D	Rome	Floyd	1871
Leitner, C. B	Columbus	Muscogee	1852
Love, Wm. Abram (V.-P.)	Atlanta	Fulton	1866
Miller, H. V. M	Atlanta	Fulton	1851
Powell, T. S. (V.-P.)	Atlanta	Fulton	1857
Smith, J. B	Perry	Houston	1870

In Memoriam.

☞SPECIAL REQUEST TO EVERY MEMBER.—The Secretary *earnestly requests each member of the Association* to aid him *in filling* THE BLANKS in the following Roll of Deceased Members *by making the necessary inquiries* in their respective cities and counties, *and writing him at once* on obtaining the desired information.

Name.	Postoffice.	County.	Admitted.	Died.
Adams, C. B	Augusta	Richmond	1868	1875
Alexander, J. R	Cave Spring	Floyd	1849	
Alexander, L. B	Forsyth	Monroe		1891
Alfriend, E. W. (V-P.	Albany	Dougherty	1852	1886
Arnold, R. D. (V-P., P.)	Savannah	Chatham	1849	1876
Ashworth, A. B. (S)	Atlanta	Fulton	1887	1889
Avary, J. C	Decatur	DeKalb	1859	1873
Baker, A. H	Augusta	Richmond	1876	1891
Ballinger, M. R	Floyd Springs	Floyd	1860	1886
Banks, J. T. (V-P., P.)	Griffin	Spalding	1858	1880
Barkwell, T. J	Hawkinsville	Pulaski	1859	
Barnett, J. W	Raytown	Taliaferro	1880	1890
Battle, H. L	Russellville	Monroe	1849	
Bell, T. W	Busbyville	Houston	1853	
Bignon, H. A	Augusta	Richmond	1852	1870
Billing, S. A	Columbus	Muscogee	1855	1872
Bizzell, W. D. (V-P.)	Atlanta	Fulton	1882	1890
Black, R. C. (T.)	Augusta	Richmond	1852	1860
Bomar, B. F	Atlanta	Fulton	1859	
Borcheim, L. E	Atlanta	Fulton	1886	1887
Boswell, S. J. (V-P)	Columbus	Muscogee	1855	
Bothwell, D. J	Vienna	Dooly	1849	
Bozeman, J. F	Atlanta	Fulton	1855	1877
Boring, John M. (V-P.)	Atlanta	Fulton	1856	1891
Brandon, D. S	Thomasville	Thomas	1873	1878
Broadhurst, W. W	Augusta	Richmond	1852	1861
Bruce, R. J	Thomasville	Thomas	1874	1880
Bunn, William	Wilna	Houston	1854	
Burgess, Wm. R. (T., O.)	Macon	Bibb	1870	1878
Burney, S. W. (P.)				1876

Name.	Postoffice.	County.	Admitted.	Died.
Campbell, Robert	Augusta	Richmond	1849	1885
Carroll, J. C	Laurens Hill	Laurens	1857	1870
Carroll, R. C	Augusta	Richmond	1873	1882
Carter C. J	Lake Park	Lowndes	1889	1898
Castlen, F. G	Macon	Bibb	1867	1874
Carlton, J. M	Athens	Clarke	1882	1883
Charlton, T. J. (C.)	Savannah	Chatham	1862	1886
Charters, W. M. (P.)	Savannah	Chatham	1851	1888
Chase, D. S	Augusta	Richmond	1862	
Clark, S. B	Rich. Factory	Richmond	1852	
Campbell, H. F. (O, V-P, P.)	Augusta	Richmond	1851	1892
Coe, J. N	Flat Rock	Pike	1856	
Coleman, John S	Augusta	Richmond	1891	1892
Colley, F. S. (P.)	Monroe	Walton	1856	
Cooper, G. F. (O., S., V-P.)	Sumter	Americus	1849	1882
Copeland, A. B	Hamilton	Harris	1878	1882
Cornwall, G. H.	Hillsboro	Jasper	1854	
Crawford, S. S	Augusta	Richmond	1857	
Crump, E. D	Herndon	Burke	1872	1881
Cumming, H. M	Augusta	Richmond	1862	1887
Cunningham, L. S	Big Creek	Forsyth	1859	1862
Cunningham, W. D	Jasper	Pickens	1859	1866
D'Alvigney, N	Atlanta	Fulton		1877
Davenport, C. W	Point Peter	Oglethorpe	1852	
Davenport, H. S	Calhoun	Gordon	1859	
Davis, W. L	Albany	Dougherty	1849	
Dean, S. H	Conyers	Rockdale	1856	
Dearing, W. E	Augusta	Richmond	1852	1867
DeCortez, C. A	Savannah	Chatham	1872	
Dickinson, J. T	Albany	Dougherty	1857	
Dickinson, R. Q. (V-P., P.)	Albany	Dougherty	1850	
Dobbins, W. O	Fort Gaines	Clay	1883	1890
Dugas, L. A. (P.)	Augusta	Richmond	1852	1884
Dupree, L. J	Camilla	Mitchell		
Engram, R. O	Montezuma	Macon	1881	1893
Eve, Jos. A	Augusta	Richmond	1852	1886
Eve, S. C	Augusta	Richmond	1868	1884
Felder, W. L	Augusta	Richmond	1857	1867
Fish, J. D. (T.)	Savannah	Chatham	1875	1879
Fitzgerald, E	Macon	Bibb	1882	1885
Ford, L. D. (P.)	Augusta	Richmond	1849	1884
Fort, Moses T	Hawkinsville	Pulaski	1859	1878

Name.	Postoffice.	County.	Admitted.	Died.
Franklin, M. A.	Macon	Bibb	1849	1858
Frazier, W. M.	Hawkinsville	Pulaski	1850	
Gaither, Henry	Oxford	Newton	1851	
Gaither, B. T.	Oxford	Newton	1852	1853
Gardner, J. W.	Augusta	Richmond	1857	
Girardy, Edward	Augusta	Richmond	1852	1859
Gordon, J. M.	Savannah	Chatham	1849	
Gray, James A. (s.)	Atlanta	Fulton	1882	1887
Gray, S. H.	Barnesville	Pike	1871	1885
Green, A. B	Pond Town	Sumter	1849	
Green, H. K.	Macon	Bibb	1849	1867
Green, Thomas F.	Milledgeville	Baldwin	1849	1879
Gregory, J. D.		Sumter	1849	
Grimes, T. W.	Columbus	Muscogee	1855	1882
Habersham, J. C.	Savannah	Chatham	1853	
Habersham, J.C., Jr.(v-p)	Savannah	Chatham	1866	1881
Habersham, S. E.	Eatonton	Putnam	1870	
Hammond, D. W.(v-p., c.)	Macon	Bibb	1857	1887
Harden, W. P.	Harmony Grove	Jackson	1852	1885
Harrell, W. J.	Bainbridge	Decatur	1874	1881
Harris, S. N. (v.-p)	Savannah	Chatham	1851	1854
Harrison, Gabriel.	Macon.	Bibb		1862
Harris, Juriah (o., v.-p.)	Savannah	Chatham	1852	1876
Havis, M. W.	Perry	Houston	1854	1890
Hart, A. C.	Waynesboro	Burke	1852	
Hawes, E. C.	Appling	Columbia	1862	
Hawkins, S. B.	Americus	Sumter	1871	1892
Heard, T. O.	Griffin	Spalding	1867	
Hendrick, J. B.	Covington	Newton	1857	1881
Henry, G. C.	West Point	Troup	1872	
Hook, E. B.	Augusta	Richmond	1857	1862
Houston, J. P. R.	Savannah	Chatham	1873	1892
Hoxey, Thomas	Columbus	Muscogee	1849	1853
Hollingsworth, W. T.	Madison	Morgan	1857	1893
Holmes, G. W.(v.-p., p., c.)	Rome	Floyd	1867	1890
Holmes, T. M. (o.)	Rome	Floyd	1883	1891
Hamilton, J. L.	Stone Mountain	DeKalb	1859	1890
Hunter, E. H. W.	Louisville	Jefferson	1857	1883
Ingraham, E. P.	Albany	Dougherty	1870	1873
Irvine, Robert.	Augusta	Richmond	1880	1881
Johnson, C. W.	Macon	Bibb	1870	1875
Johnson, John M.	Atlanta	Fulton	1866	1886

Name.	Postoffice.	County.	Admitted.	Died.
Jones, B. O.	Atlanta.	Fulton.		
Jones, J. W.	Atlanta.	Fulton	1857.	1871
Kennedy, L. P.	Atlanta.	Fulton.	1890.	1892
Kennebrew, Henry	Athens.	Clarke	1883.	1886
Kirksey, E. J. (V.-P.).	Columbus	Muscogee.	1871.	1877
Kollock, P. M. (P.)	Savannah	Chatham	1852.	1872
Lamar, T. R. (V.-P.)	Macon.	Bibb	1849.	1859
Lackhart, R. H.	Columbus	Muscogee.	1855.	1859
Lattimer, C. T.	Macon.	Bibb	1889.	1889
Lawrence, L. L.	Blountsville	Jones	1889.	1890
Lightfoot, W. S.	Macon	Bibb	1849.	1864
Long, Crawford W.	Athens.	Clarke	1849.	1878
Logan, J. P. (P.)	Atlanta.	Fulton.	1858.	1891
Lumpkin, George.	Maxey's Depot.	Oglethorpe.	1859.	
Lumpkin, S. P.	Watkinsville	Clarke	1859.	
Mackie, J. D.	Augusta.	Richmond.	1852.	1854
Maffit, R. G. W.	Dalton	Whitfield.	1859	
Matthews, W. B.	Fort Valley.	Houston.	1884	1885
McBride, W. G.	Oconee	Washington	1850.	1878
McDowell, J. M.	Barnesville	Pike	1887.	1891
McGolrick, R.	Macon	Bibb	1849.	1858
McKinley, C. A.	Newnan	Coweta	1859.	
McMillan, J. E.	Columbus	Muscogee	1872.	1883
Means, A. (V.-P.)	Oxford	Newton.	1851.	1888
Means, O. S.	Oxford	Newton	1857.	
Meiere, William S.	Madison	Morgan	1857.	
Milam, R. J.	Fairburn	Campbell.	1882.	1882
Morrison, D. H.	Savannah	Chatham	1868.	1869
Musgrove, W. C. (C.S.).	Midville.	Burke.	1849.	1876
Nash, R. A.	Marion	Twiggs	1849.	
Nisbet, R. H.	Eatonton	Putnam	1854.	1878
Noell, S. G.	Ypsilanti	Talbot.	1892.	1892
Nottingham, C. B. (S,T,C,P)	Macon	Bibb	1849.	1875
Nunn, R. M.	Savannah.	Chatham	1871.	1873
Ogilby, H. J. (V.-P.)	Madison	Morgan	1849.	1873
O'Keefe, D. C. (S.)	Atlanta.	Fulton	1852.	1871
Orme, L. H. (S.)	Atlanta.	Fulton.	1866.	1872
O'Sullivan, ——	Cork	Lee	1849.	
Owen, J. D.		Baldwin.	1850.	
Parsons, J. M.	Russellville	Monroe	1845.	
Pitts, G. W.	Star.	Butts.	1859.	

Name.	Postoffice.	County.	Admitted	Died.
Posey, J. F.	Savannah	Chatham	1851	
Pringle, W.	Covington	Newton		
Ragan, Isham H.	Palmyra	Lee	1856	
Raines, Thomas	Atlanta	Fulton	1872	1883
Raines, T. L.	Atlanta	Fulton	1882	1884
Rauschenberg, Christ'n.	Atlanta	Fulton	1861	1878
Richardson, C. P.	Savannah	Chatham	1851	1853
Ridley, R. A. T. (v-p.)	LaGrange	Troup	1859	1871
Robertson, J. J.	Washington	Wilkes	1852	1872
Roddy, R. L. (v-p.)	Forsyth	Monroe	1849	1878
Ruffin, W. R.	Augusta	Richmond	1852	
Russell, W. J.	Lawrenceville	Gwinnett	1861	
Ryan, T. D. L.	Hawkinsville	Pulaski	1859	1876
Stafford, S. J.	Madison	Morgan	1856	1859
Searcy, D. B.	Bolingbroke	Monroe	1849	1885
Shropshire, J. W.			1871	
Simmons, J. N.	Atlanta	Fulton	1850	1871
Simmons, J. S.	Gainesville	Hall	1873	1881
Simmons, S. B.	Augusta	Richmond	1852	1867
Simmons, T. A.	Irwinton	Wilkinson	1871	1872
Slaughter, J. T.	Villa Rica		1859	1889
Smith, A. D.	Montezuma	Macon	1871	
Smith, C. W.	Jonesboro	Clayton	1859	
Smith, Hiram	Augusta	Richmond	1876	1888
Smith, H. H.	Augusta	Richmond	1886	1887
Smith, R. M. (c.)	Athens	Clarke		1879
Smith, Thomas	Savannah	Chatham	1858	1876
Spier, W. A.	Grantville	Coweta	1859	
Stallings, J. D.	Preston	Webster	1871	
Stanford, F. A.	Columbus	Muscogee	1849	1885
Starr, E. P.	Savannah	Chatham	1868	1873
Steele, H.	Knoxville	Crawford	1849	
Steele, R. T.	Fairburn	Campbell	1849	
Steiner, H. H.	Augusta	Richmond	1857	1892
Stephens, W. B.	Forsyth	Monroe	1849	
Sterling, W. L.	Atlanta	Fulton	1878	1894
Stewardson, Thomas	Savannah	Chatham	1849	
Stozier, L. L.	Albany	Dougherty	1867	
Sutton, C. B.		Lee	1856	
Taliaferro, V. H. (v-p.)	Atlanta	Fulton	1857	1887
Taylor, E. T.	Columbus	Muscogee	1855	
Taylor, R. N.	Hawkinsville	Pulaski	1850	
Thomas, J. G. (v-p, p, c, t.)	Savannah	Chatham	1867	1885

Name.	Postoffice.	County.	Admitted.	Died.
Thompson, Charles	Macon	Bibb	1849	1854
Trammell, A. A	Forsyth	Monroe	1856	
Tucker, O. W	Brunswick	Glynn	1890	1891
Underwood, J. B	Cave Spring	Floyd	1860	1881
Van Meter, J. N	Euharlee	Bartow	1879	1881
Wall, W. W	Calhoun	Gordon	1860	
Walker, T. F	Cochran	Pulaski	1859	1888
Walker, F	Macon	Bibb	1889	1891
Ware, A. E. O			1859	
Waring, J. J	Savannah	Chatham	1853	1888
Watson, W. A	Jefferson	Jackson	1883	1889
Wells, C. H	Savannah	Chatham	1853	1854
Wells, W. B	Chattanooga	Tennessee	1873	1891
West, Charles (P.)	Perry	Houston	1849	
West, C. W	Savannah	Chatham	1853	1859
Westmoreland, W. F. (P)	Atlanta	Fulton	1856	1890
White, S. G., (V-P.)	Milledgeville	Baldwin	1868	1877
Whitlock, Isaac W	Washington	Wilkes	1852	1853
Wile, Henry	Atlanta	Fulton	1886	1887
Wiley, J. B	Macon	Bibb	1849	
Williams, T. L		Dooly	1849	
Williams, W. L	Fayetteville	Fayette	1873	
Willingham, Willis	Lexington	Oglethorpe	1849	1872
Winn, G. A	Bolingbroke	Monroe	1849	1862
Wirsen, G. F	Rutledge	Morgan	1871	1884
Woodson, C. T	Wilna	Houston	1854	
Wooten, W. H	Lexington	Oglethorpe	1852	1860
Word, T. J	Rome	Floyd	1887	1890
Word, R. C	Atlanta	Fulton	1855	1890
Wragg, J. A	Savannah	Chatham	1853	
Wright, P. H	Macon	Bibb	1869	1888
Yonge, Easton	Savannah	Chatham	1880	

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